ELECTRICAL SOUTH

NOVEMBER 1948

A Monthly Journal for Electric Power Companies, Electrical Contractors, Wholesalers and Dealers

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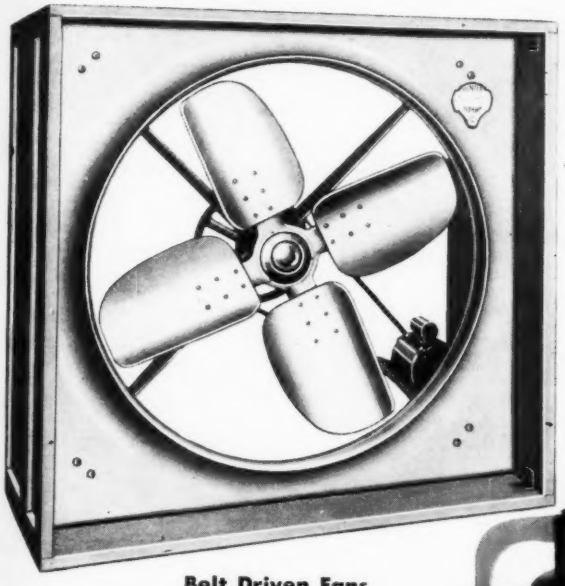
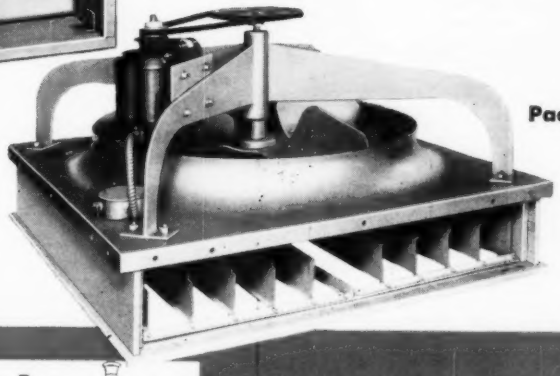


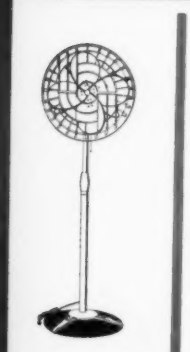
Belt Driven Fans

HUNTER FANS

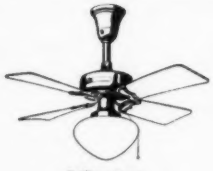
For every purpose



Package Fans



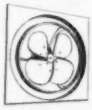
Pedestal Airspread Fans



Ceiling Fans

Window Fans

Ceiling Airspread Fans



Exhaust Fans

Oscillating Fans

HUNTER FAN & VENTILATING CO., Inc.

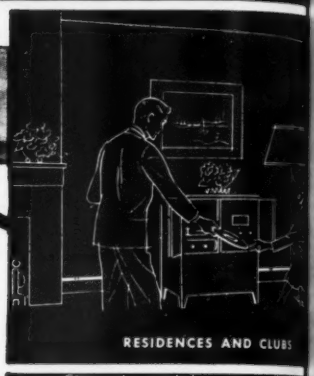
Exclusive Fan Makers Since 1886

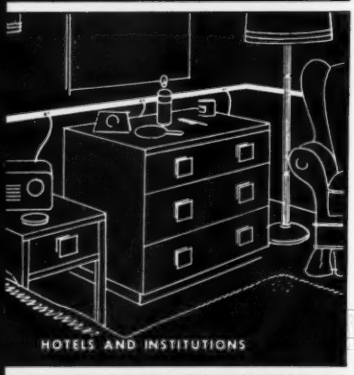
400 S. FRONT ST., MEMPHIS, TENN.

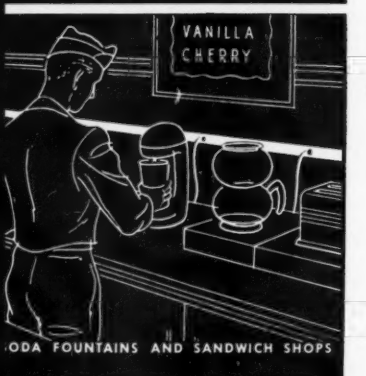
Branches in
New York, Chicago, St. Louis, New Orleans
Sales Offices in Principal Cities

A new revolutionary electrical Plug-in Strip

For Commercial and Residential Use







AT LAST—

A PROFESSIONAL Multi-Outlet Wiring Assembly that is:

ARCHITECTURALLY CORRECT

EASY TO INSTALL

SAFE AND STRONG

PROFITABLE AT NOMINAL INSTALLED COST

4 Outstanding Features...

1. *Solid copper electrical system* from panel box to last outlet . . . Not a screw or a soldered connection in it!
2. *Life-time, fool-proof receptacles . . .* Plug prongs receive full length contact and wipe.
3. *Easy to cut on the job . . .* Short lengths are cut to fit in a manner similar to conduit.
4. *Tamper-proof . . .* Capping is permanently locked on. There's no reason to ever open up Plug-In Strip.

Listed by Underwriters' Laboratories.

MAIL the coupon today for complete information on this revolutionary *professional* wiring assembly.

NATIONAL ELECTRIC PRODUCTS
NE
WIRING SYSTEMS
WIDTHS AND FABRICS

National Electric Products Corporation
1310 Chamber of Commerce Building
Pittsburgh 19, Pa.

☐ Please send me your catalog on the NEW PLUG-IN STRIP.

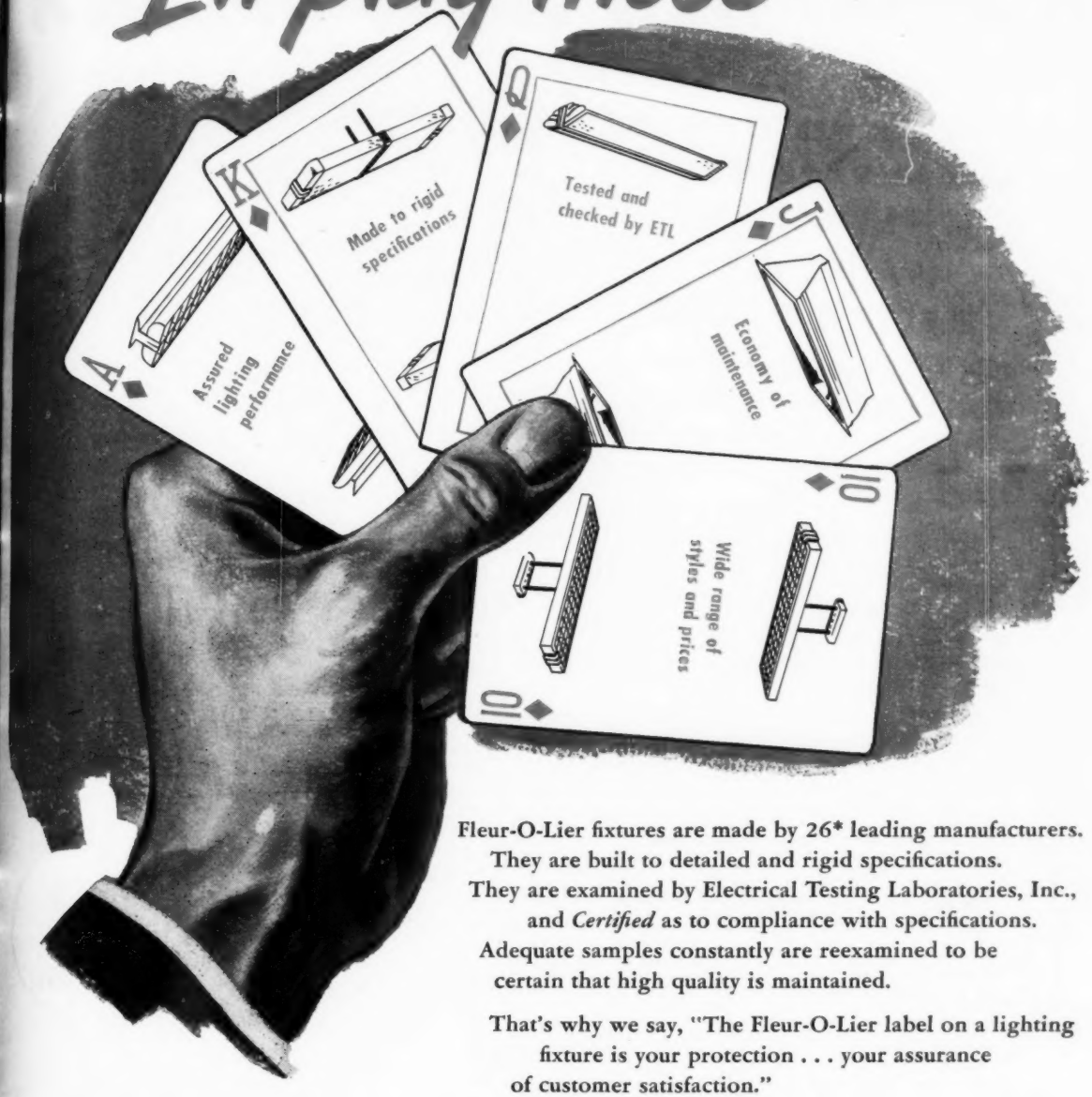
☐ Also installation information.

NAME _____

ADDRESS _____

_____

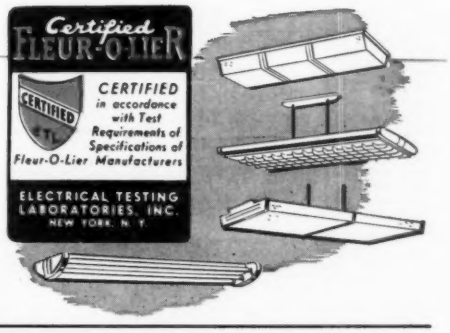
"I'll play these"



Fleur-O-Lier fixtures are made by 26* leading manufacturers. They are built to detailed and rigid specifications. They are examined by Electrical Testing Laboratories, Inc., and *Certified* as to compliance with specifications. Adequate samples constantly are reexamined to be certain that high quality is maintained.

That's why we say, "The Fleur-O-Lier label on a lighting fixture is your protection . . . your assurance of customer satisfaction."

*Participation in Fleur-O-Lier is open to any manufacturer wishing to qualify. Consequently, the number of Fleur-O-Lier manufacturers is increasing constantly.



FLEUR·O·LIER

Manufacturers

2116 Keith Building • Cleveland 15, Ohio

Fleur-O-Lier is not the name of an individual manufacturer, but of a group of fixtures made by leading manufacturers. Participation in the Fleur-O-Lier program is open to any manufacturer who complies with Fleur-O-Lier requirements.

ELECTRICAL SOUTH is published monthly by W. R. C. Smith Publishing Co., Marietta, Ga., and Atlanta, Ga., U. S. A. Subscription rates, United States and Possessions, $1.00 for one year; Canada and Foreign Countries, $10.00 per year. Entered as second class matter at the postoffice, Marietta, Ga., under Act of March 3, 1879.

Volume 28 Number 11

A GREAT NEW SALES BUILDER

BIG RANGE PERFORMANCE AT SMALL RANGE COST

UNIVERSAL BANTAM ELECTRIC RANGE

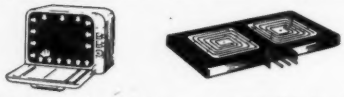
Plugs Into Any Appliance Outlet . . . Meets Every Cooking Requirement!

Here is your first big opportunity in years to expand your Electric Range market. New Bantam Electric Range plugs into any appliance outlet with no costly installation charges.

BIG RANGE CAPACITY IN SMALL RANGE SPACE! Its easily accessible oven will roast a 20-pound turkey . . . bake four cakes . . . cook a complete meal.

BIG RANGE CONTROLS IN A SMALL RANGE! Oven is thermostatically controlled for perfect baking results—operates on standard oven heats. Order your stock of Bantam Ranges today for that big new home and auxiliary cooking market.

2-WAY HEATING makes this amazing Range possible!



1. Wrap-around Oven Element gives uniform oven heat for baking and roasting.

2. Reversible Twin Unit for broiling and cooking plugs in top or bottom.

YEAR 'ROUND CAMPAIGN OPENS NEW MARKETS!

UNIVERSAL is backing its Bantam Electric Range with consistent advertising and promotion. Full page four-color advertisements in national magazines . . . hard-hitting newspaper coverage . . . penetrating advertising to millions of radio listeners through participation shows . . . dynamic point-of-sale support. Plan now to tie in!

See Your Universal Distributor!

UNIVERSAL

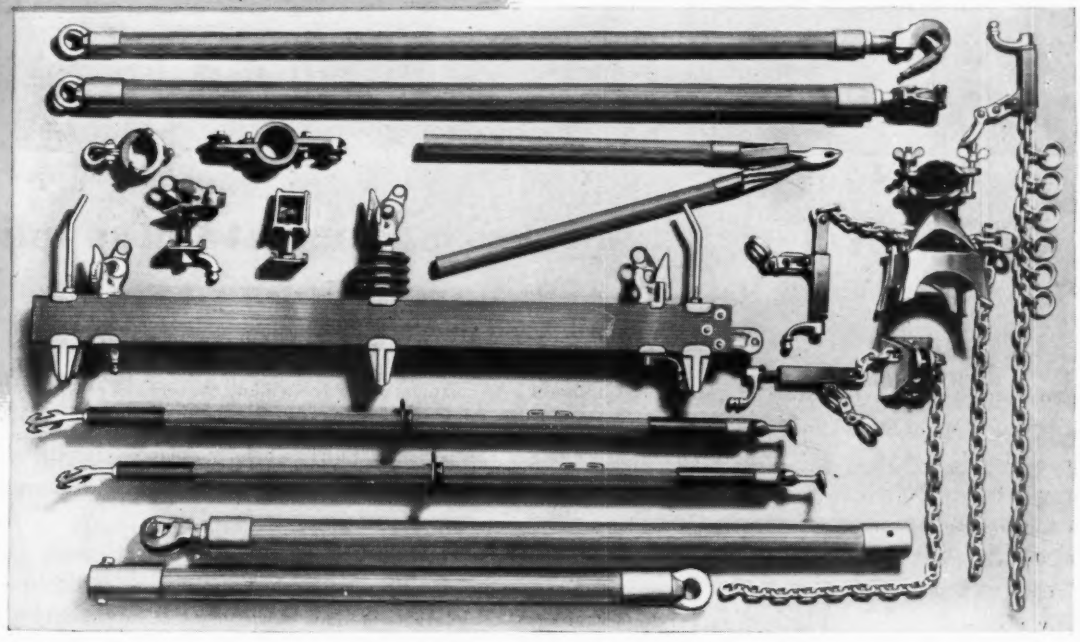
LANDERS, FRARY & CLARK • NEW BRITAIN, CONN

The "Hot Line Gang's" Choice—

KEARNEY Hi-Line Rural Line Tool Set

Tested for Safety... Engineered for Efficiency

"Hot Line Gangs" everywhere appreciate the rugged efficiency, the light, easy-to-handle simplicity of Kearney Hi-Line Tools. To be sure that your linemen are supplied with tools that will enable them to handle jobs safely and efficiently, provide them with field-tested Kearney Tools. Available in complete sets, as shown, or you can order individual tools to meet your "fill-in" requirements.



Here's What You Get in the Kearney Rural Line Tool Set No. 4778-3, which is shown above:

1 Chain rope hitch • 2 Pol-Grips 1.25′ to 3″ • 2 Pol-Grip extensions • 2 Lift-Pol snubs • 2 Fit-on tie heads • 1 Insulated pliers 1.25″ x 5′, oak • 1 Lift-Pol, 2″ x 10′ • 1 Han-Pol, 1.5″ x 10′ • 2 Combination tie sticks • 1 Lift-Pol, 2.5″ x 16′, spliced • 1 Side arm, 9′ long, less fittings • 1 Insulator conductor holder assembly • 1 Side Arm attachment • 1 Brace bracket assembly • 4 Conductor holders • 1 Pol-Band, 2.5″ • 2 Line guard assemblies.

FOR BETTER CONSTRUCTION AND MAINTENANCE

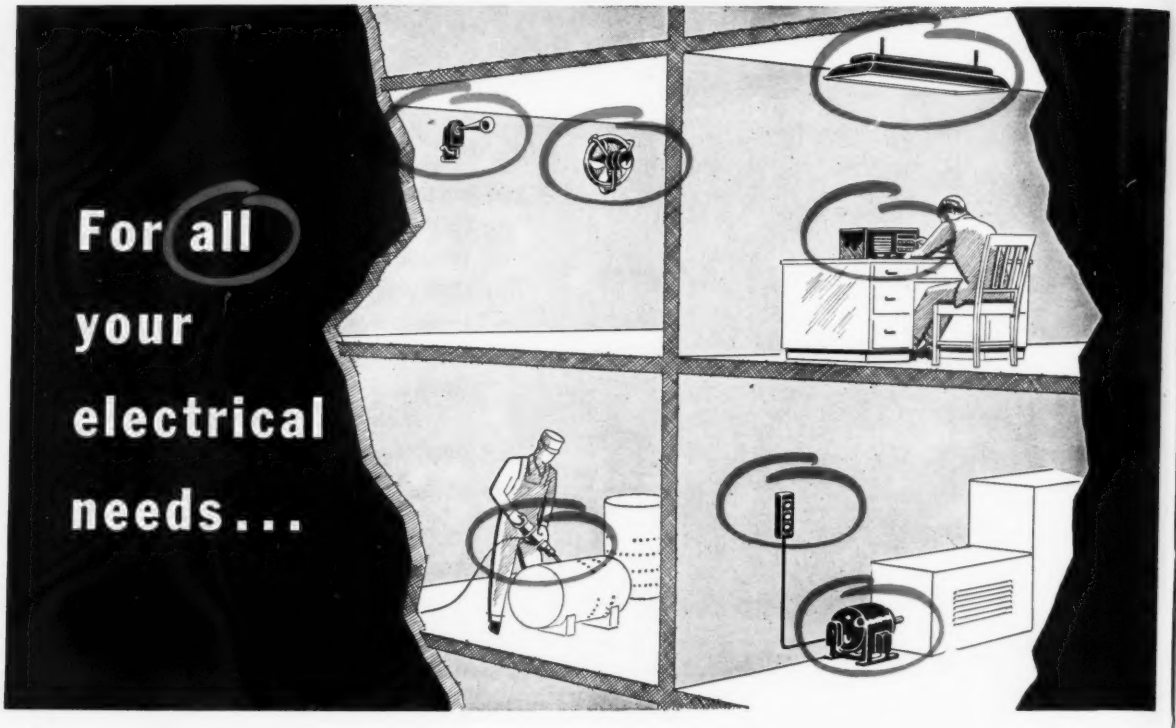
Always Specify KEARNEY PRODUCTS *for the Job*

JAMES R. KEARNEY CORPORATION ST. LOUIS, MO.

4224-42 CLAYTON AVE. – ST. LOUIS 10, MISSOURI

Canadian Plant, James R. Kearney Corp., Ltd., Leaside, Ontario, Canada

-112



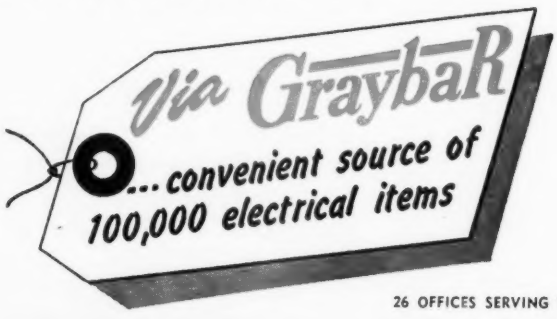
GraybaR offers field-proved equipment and supplies
plus help in planning and application

From a single source — through your local Graybar Representative — you or your Electrical Contractor can obtain the electrical products of more than two hundred leading manufacturers! With a single order to Graybar, you can accomplish the work of many separate orders from a multiplicity of sources. You save much time and "paper work".

You can expect satisfactory service of every item you get via Graybar. As we have built up our catalog of "everything electrical" over the years, we have selected only products of field-proved performance.

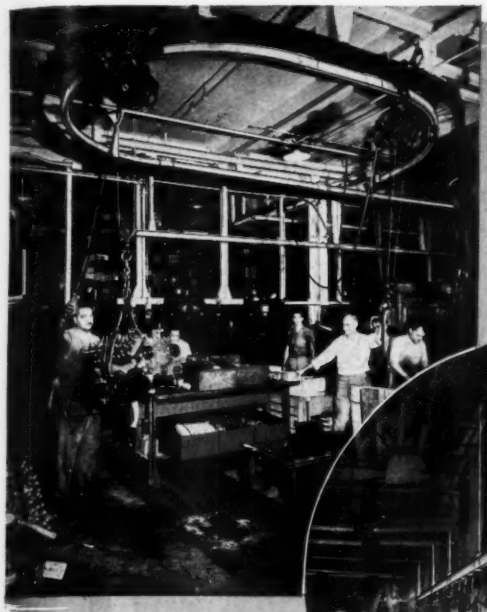
But Graybar is more than just a fast order-filler. Our customers have free call on the services of Graybar Specialists in each kind of electrical problem. These highly experienced men can help you plan your electrical projects — help select and apply the most suitable equipment — for optimum efficiency.

You can get quick delivery of many items from stocks at our near-by warehouse. And you can help avoid work-delays due to lack of scarce items, by planning ahead with your Graybar Representative now. *Graybar Electric Company, Inc. Executive offices: Graybar Building, New York 17, New York.* 4884



26 OFFICES SERVING THE ELECTRICAL SOUTH

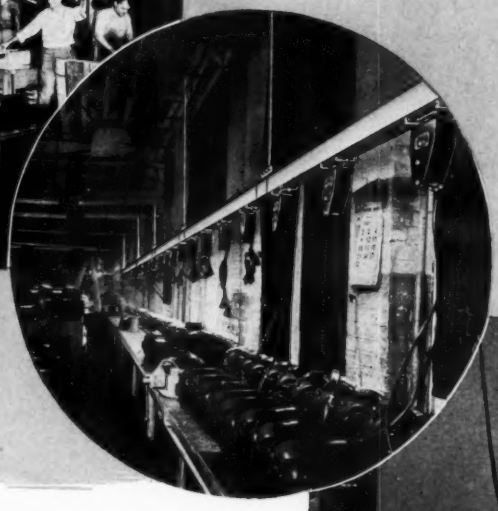
WIRING • LAMPS and LIGHTING • COMMUNICATION • SIGNALING • VENTILATION • CONTROL • POWER APPARATUS • TOOLS



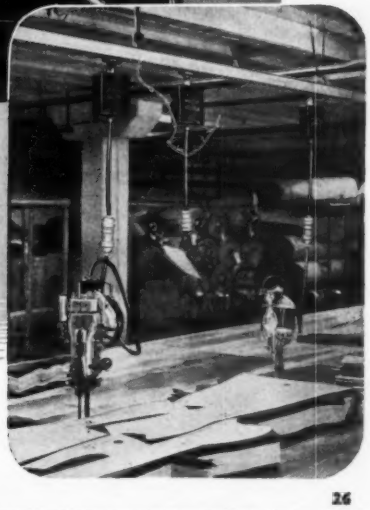
Overhead

On Test

On the Production Line



On the Bench



IF IT MOVES it should be FEEDRAIL

Ask any electrical maintenance man. He will say half his time is consumed in the repair of loose or exposed wires, and broken or faulty connections. Ask any safety man. He knows moving electrical equipment is one of the worst hazards in the plant.

Then install Electric Feedrail, the modern, totally enclosed electric distribution system. Watch men work with portable tools connected to the overhead trolley with Ever-Lok trouble-proof connectors. See what it does for moving test lines, lights, cranes and hoists. Everywhere it speeds production, saves maintenance, and reduces electrical hazards.

You can see what it is doing for others by asking for the New Feedrail Catalog No. 20, 32 pages, more than 100 illustrations, diagrams and specification data. Write for your copy to-day.

26

ELECTRIC FEEDRAIL

FEEDRAIL CORPORATION

Subsidiary of Russell & Stoll Company, Inc.

125 BARCLAY STREET • NEW YORK 7, N. Y.

New Thrust in Motor Advertising

These new Hoover Motor advertisements are a fresh approach to electric motor advertising.

They are designed to make the man who wants a motor stop, look and read—and get the basic facts on this high-quality motor.

In appearance and tone, these messages put across the story that Hoover Motors are built better to run longer.

Don't miss out on the sales this advertising is creating for Hoover Motors. If you don't carry Hoover Motors now, write us for details.

ELECTRIC MOTOR DIVISION
THE HOOVER COMPANY
North Canton, Ohio

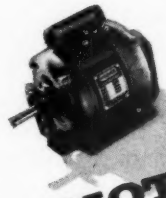
This advertisement appears in the November issues of *Popular Mechanics, Farm Journal, Successful Farming,* and *Electricity on the Farm.*

NEAT

This resilient mount is a neat, workmanlike job of die casting, with precision-fit rubber insert. It plainly shows "engineered efficiency"—the reason why Hoover Motors run so smooth, so quiet, so cool even in continuous operation. New resilient and rigid units meet NEMA mounting dimensions. If you need a motor on your farm, you need a Hoover Motor.

Order today from your nearest dealer.

Hoover Motors are made in ratings of ¼ hp up to 1 hp by the makers of the world-famous Hoover Cleaners.



HOOVER MOTORS
Electric Motor Division . . . . The Hoover Company . . . . North Canton, Ohio

Durasheath

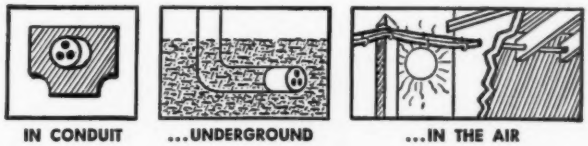
built for those TOUGH JOBS!

Small sizes or large . . . one, two or three conductors . . . moisture-resisting insulation . . . from 0 to 5,000 volts . . . Durasheath is built for rugged service:

Durasheath offers high tensile strength and resistance to impact and abrasion—*plus* extreme flexibility that makes it easier to handle. Also, Durasheath resists moisture, acids and alkalies generally found in the soil, eliminates problems of electrolysis, corrosion and extremes in temperature and is highly resistant to flame—making it possible to use a single type and size of cable in runs that are partly aerial, partly underground or in conduit.

For complete information, write for Publication C-27.

45450



IN CONDUIT ...UNDERGROUND ...IN THE AIR

Anacondaloy®-coated copper conductors are insulated with a moisture-resisting synthetic rubber compound, bound with color-coded rubber-filled tape and enclosed in a tough, high mechanical strength, moisture and flame-resistant outer jacket of Neoprene. Conductors have the lasting protection of a solid block of synthetic rubber and Neoprene.

®Reg. U. S. Pat. Off.

Durasheath

AN *Anaconda* PRODUCT

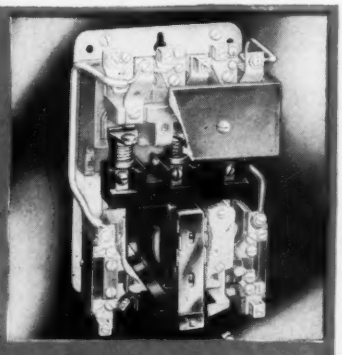
ANACONDA from mine to consumer

ANACONDA WIRE AND CABLE COMPANY

25 Broadway, New York 4, N. Y.

STUDY the elements of a Federal NOARK Motor Starter; and learn, in 6 quick lessons, why simplified motor control does a better job! You get unfailing overload protection; quick, easy replacement of

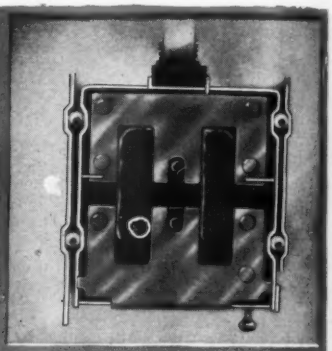
ONLY ONE MOVING UNIT



LESSON #1

The SINGLE moving unit in Federal NOARK motor controls means less chance for trouble. Greatly simplified, the movable magnet and contact assembly, indicated in dark gray on the illustration, minimizes breakdowns and reduces maintenance costs.

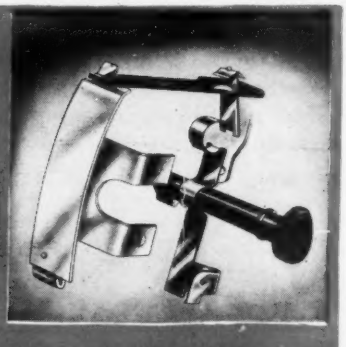
SMOOTH BALL BEARING ACTION



LESSON #2

To eliminate friction, the ONLY moving unit in a Federal rides on ball bearings. Raceways guiding the balls are hardened to multiply the life of this moving unit. Mechanical trouble doesn't have a chance to develop in a Federal NOARK Starter.

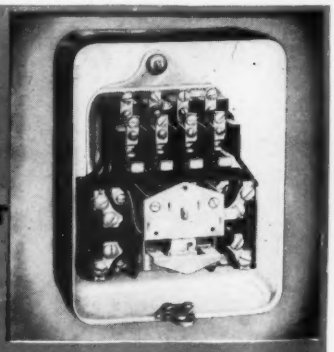
AUTOMATIC OR MANUAL RESET



LESSON #5

Another great advantage of Federal NOARK motor controls is the choice of instantly getting either automatic or manual reset. By just turning the readily accessible red knob, you can secure the type of overload protection you want.

COMPLETE ACCESSIBILITY FROM THE FRONT



LESSON #6

Armed with a screw driver, you can strip the entire Federal starter mechanism to the base without taking it out of the enclosure. That means that heaters and stationary contacts can also be quickly changed from the front. It's further proof that Federal NOARK motor controls can be quickly inspected and easily maintained.

MOTOR CONTROLS COSTS NO MORE!

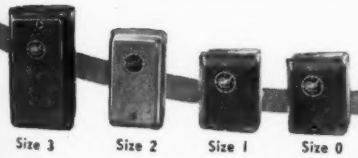
coils and contacts; frictionless solenoid action that sees you through the heaviest production schedules. Federal NOARK gives you rugged, easily maintained motor controls that cost not a penny more.

IMMEDIATE COIL REPLACEMENT
LESSON #3
Replacing a coil in a Federal NOARK Motor Starter is an A. B. C. operation. A. Press up the coil-retaining spring and pull it out. B. Loosen the screw and lift out the movable magnet. C. Disengage the coil leads and pull out the coil. A new coil goes in place in seconds!

INSTANT CONTACT RENEWAL
LESSON #4
Renewing double break, solid silver contacts in a Federal NOARK Motor Starter is simple. On size 0 and 1, just press the end of the one-piece contact down and pull; it comes out easily. Slide in a new contact and the job is done. Once in, it can't loosen or vibrate out.

DISTRICT OFFICES IN ALL PRINCIPAL CITIES.

Federal NOARK
MOTOR STARTERS



FEDERAL also manufactures size 4 and 5 Magnetic Motor Starters. A complete line of Manual Starters . . . Magnetic Contactors . . . Combination Motor Starters . . . Reversing Contactors and Starters . . . Combination Reversing Starters . . . Magnetic Multi-Speed Starters . . . Reduced Voltage Magnetic Starters . . . Automatic Transfer Panels.

FREE!

Federal NOARK Motor Control folder and FEDERALOG (Outlining the complete Federal NOARK line)

SEND THIS COUPON TODAY!

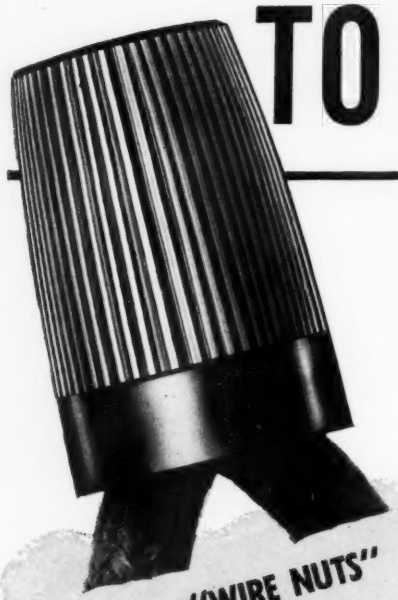
Federal Electric Products Company
50 Paris Street
Newark 5, New Jersey

Please send me free copies of the Federal NOARK Motor Starter folder and the Federalog.

NAME .....
ADDRESS .....
CITY ..... STATE .....

EXECUTIVE OFFICES: 50 Paris Street, Newark 5, New Jersey. PLANTS: Hartford, Conn., Newark, N. J., St. Louis, Mo., Long Island City, N. Y.

IT COSTS YOU LESS TO USE THE BEST

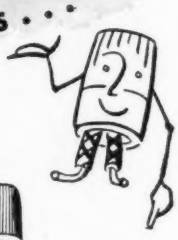


IDEAL Wire-Nuts*

Patented, No 1,933,555

THE SOLDERLESS, TAPELESS WIRE CONNECTORS

Only "WIRE NUTS" give you all these advantages . . .



Easier to Use
Just screw on—that's all! No solder, tape or tools.

Resist Pull-Out
A "Wire-Nut" joint of two No. 14 wires will stand up to 176 pounds pull.

Dependable
Not affected by vibration. Non-corrosive — resists abrasion.

Safe
Wire ends fully insulated by strong, moisture-resistant Bakelite shell that prevents "grounds" and "shorts".

Top Quality
Built to precision standards. Inspected and tested with laboratory care.

Approved
IDEAL "Wire-Nuts" are listed by Underwriters' Laboratories, Inc., and approved by other leading electrical authorities.

*Trade Mark Reg. U. S. Pat. Off.

The cost of the "Wire-Nuts" used in any wiring job is a very small part of the total job cost—actually only a few cents per connection. Yet, it's what you get for those few cents that makes "Wire-Nuts" the most economical wire connectors you can buy, on the basis of overall costs . . . that *may* make the difference between a good job and one that's a headache for both contractor and owner.

That's because the extra quality you get in "Wire-Nuts" never varies. *In 1,000 "Wire-Nuts" you can count on 1,000 perfect wire joints.* No "duds", no rejects, no connections that must be remade at added cost and time!

From raw materials to finished product, "Wire-Nuts" must undergo the most rigid control at every production step. . . . Molding compound used in the protective plastic shell must be *exactly* right. Wire for the spring insert is tested for strength and uniformity of size, then copper coated for extra protection and corrosion resistance. Inserts themselves are sample-tested on a 40-to-1 comparator to .001" tolerance. . . . In all, the finished "Wire-Nut" must pass nine different inspections and tests.

Costly for IDEAL to be so particular? Of course it is—but it's the reason why "Wire-Nuts" cut your costs on the job, And—*added to the fact that "Wire-Nuts" are the easiest and fastest way to make approved wire joints*—it's the reason why contractors prefer "Wire-Nuts" 7-to-1 over any other mechanical connector, as shown by recent survey.

It is also the reason why, if you aren't using "Wire-Nuts", you should be! Get a supply today from your IDEAL Distributor . . . IDEAL INDUSTRIES, Inc., Sycamore, Illinois.

IDEAL *Distributed Through* AMERICA'S LEADING WHOLESALERS

MERTLAND

AUTOMATIC ELECTRIC HOT WATER HEATERS

The C-O-M-P-L-E-T-E Line

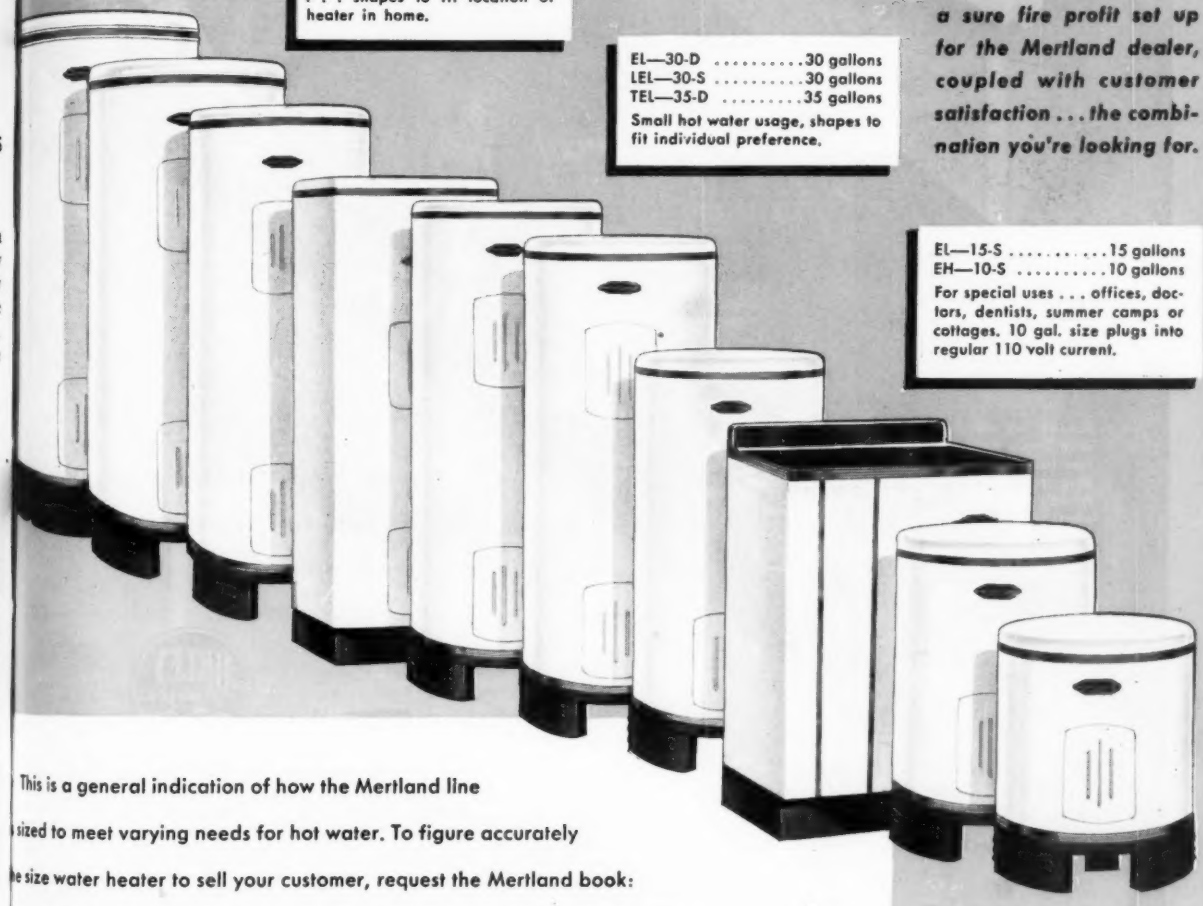
No other line of automatic electric water heaters gives you this combination of advantages: **Complete line . . . the sizes and shapes your customers want . . . *plus* . . . top grade construction, design and finish . . . all essentials with many Mertland extras built in by the manufacturers who are water heater specialists . . . *plus* . . . a price structure low enough to give you a competitive edge. *There's a sure fire profit set up for the Mertland dealer, coupled with customer satisfaction . . . the combination you're looking for.***

EL—100-D . . . . . 100 gallons
EL— 80-D . . . . . 80 gallons
EL— 66-D . . . . . 66 gallons
Sizes for large home, large family, many hot water using appliances.

EL—50-D . . . . . 50 gallons
SEL—40-D . . . . . 40 gallons
EL—40-D . . . . . 40 gallons
TEL—45-D . . . . . 45 gallons
For medium hot water demands . . . shapes to fit location of heater in home.

EL—30-D . . . . . 30 gallons
LEL—30-S . . . . . 30 gallons
TEL—35-D . . . . . 35 gallons
Small hot water usage, shapes to fit individual preference.

EL—15-S . . . . . 15 gallons
EH—10-S . . . . . 10 gallons
For special uses . . . offices, doctors, dentists, summer camps or cottages. 10 gal. size plugs into regular 110 volt current.



This is a general indication of how the Mertland line
sized to meet varying needs for hot water. To figure accurately
e size water heater to sell your customer, request the Mertland book:
"Why You Need a Mertland Automatic Electric Hot Water Heater." This book
ives an accurate method for determining the proper size for any given family.

UL

M. M. HEDGES MANUFACTURING COMPANY, INC.

MEMBER OF NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

• WATER HEATER SPECIALISTS •

CHATTANOOGA, TENNESSEE

MEMO:

To Dealers who think all Freezers are alike

No Freezer Can Compete With ORLEY

For Personality!

Designed to attract the eye ... with that certain extra something that makes it stand out from the crowd. Compact, table-top height.

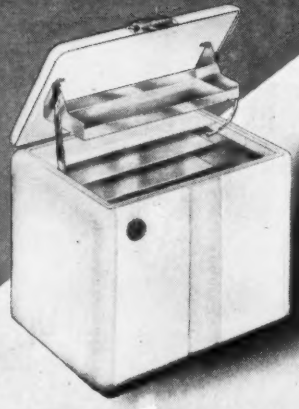
For Performance!

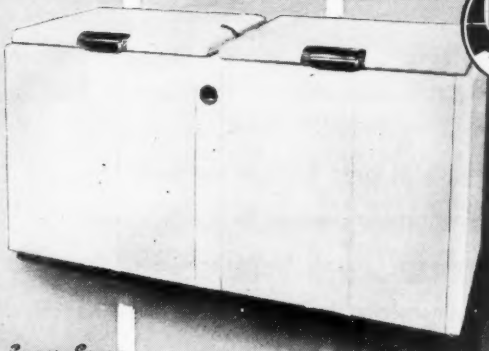
Precision-built, completely automatic. No dials. No gadgets. QUICK-FREEZING Insto-Freeze shelves ... an Orley exclusive! Trouble-free operation. No service worries.

For Price!

Inch for inch and dollar for dollar, Orley is the best buy. Nu-Type insulation provides 50% more capacity in 30% less space. Per-cubic foot capacity, ORLEY offers greatest freezer value.

Just these two ORLEY models are all you need for profitable freezer business!





ORLEY Freezer

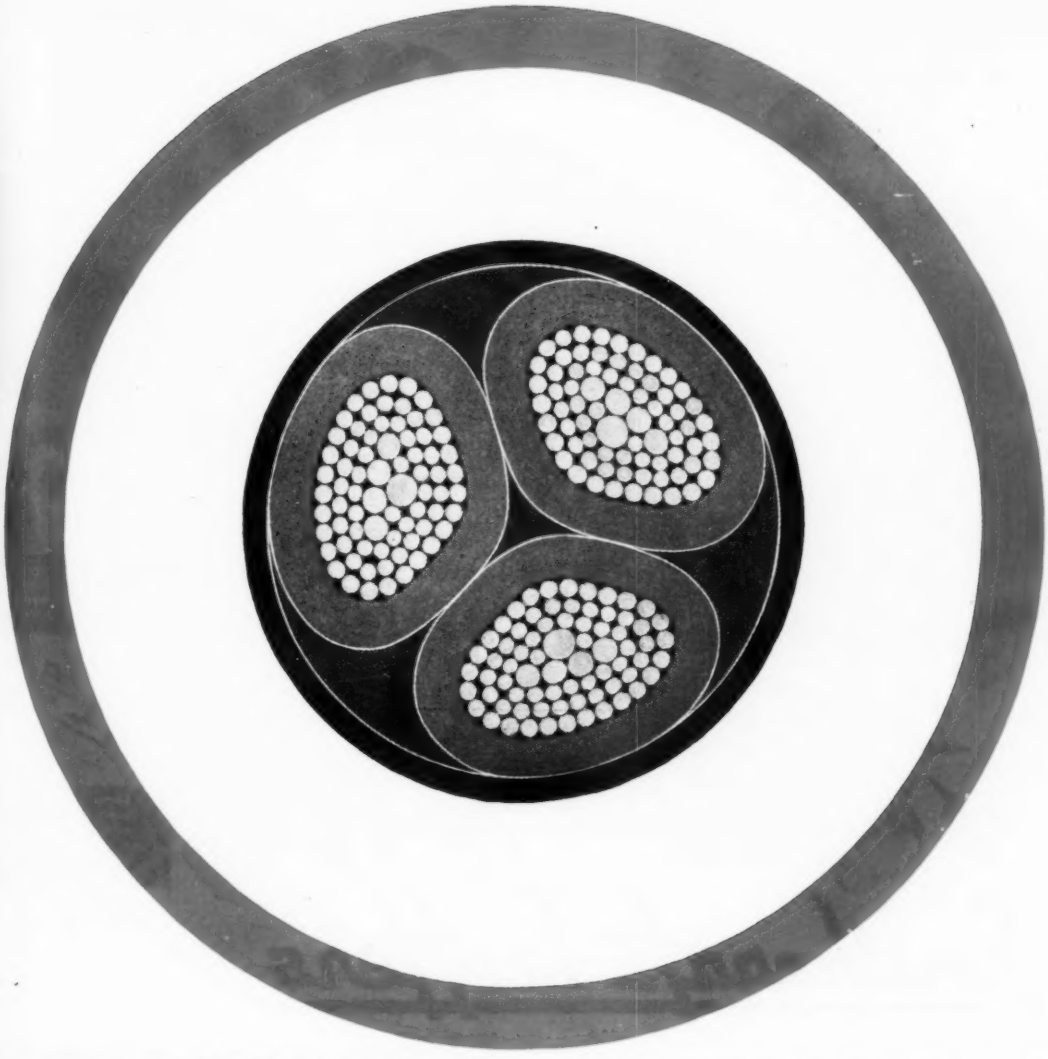
ORLEY *Super Seven*

Your customers get 7½ cubic-foot capacity in less over-all space than conventional 5-foot models. Exclusive INSTO-FREEZE SHELVES freeze on contact! Also exclusive ... HANDEEZ TRAY. Handsome Dulux finish.

ORLEY *Sixteen*

Imagine! Sixteen cubic-foot-capacity-in unit only 66" long, 36" high, 28" front-to-back. Completely automatic. Exclusive INSTO-FREEZE shelves. Dulux finish. Butterfly locking device. Many other exclusive features.

ORLEY FREEZERS, INC., *Detroit 25, Michigan*



When you buy a Simplex Paper Insulated Cable:—

—Experienced cable engineers will make careful field studies of your operating conditions and special problems and will design a special Simplex Paper Cable to give you efficient service. If you prefer, the cable will be manufactured to your specifications.

—The insulating paper and the oil have been selected after much research to find materials that are completely compatible and will give you the operating characteristics you want in your cable.

—The equipment used to manufacture your cable will be completely up-to-date. The tensions, overlays, vacuums, impregnating machinery are all automatically controlled and all are carefully chosen to produce optimum results in the finished cable.

—The work will be done by experienced workmen under expert supervision.

—Tests will be made during manufacture and before shipment to be sure the cable meets your specifications and our rigid requirements.

—The cable you will get will be your cable — custom-made for you.

Bulletin #109 — Simplex Paper Insulated Cable — will be sent upon request.

Simplex

WIRES & CABLES

SIMPLEX WIRE & CABLE CO., 79 SIDNEY ST., CAMBRIDGE 39, MASS.

for

UNEQUALLED SPEED of installation specify

Smithcraft Troffers

Regardless of the type of ceiling involved, Smithcraft Troffers are unsurpassed for speed of installation. This speed has resulted in one electrician cutting his estimated charge of installation in half after actually putting up a few sections of Smithcraft Troffers. This time and money saving installation is made possible by the patented Aligner Hanger and other exclusive Smithcraft developments.

For use with louvered troffer, Smithcraft has developed the exclusive Duo-Cam Hanger which hinges or releases louvers by simple finger tip pressure.

The Smithcraft Hinged Envelope Frame for use with glass troffer locks glass securely in a metal envelope without clips, permits access to troffer interior without removing glass.

The Smithcraft Plaster Frames for use in new plaster ceilings assures completely accurate rows or geometric patterns of troffers.

The Smithcraft Trim Flange, which snaps on reflectors, covers all ceiling irregularities simply and easily.

For troffers that "go up faster" see your Smithcraft Representative.

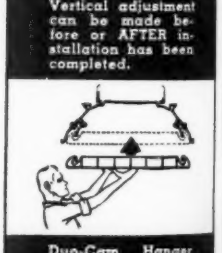
ALIGNER HANGER

Can be installed in any type of ceiling without exact positioning. Allows lateral and longitudinal adjustment of troffer to fit ceiling requirements and permits up and down elevation of troffer BEFORE or AFTER installation has been completed.

Aligner Hanger can be installed in any ceiling without exact positioning.

Longitudinal adjustment — simply slide unit on Aligner Hanger arms until it is in desired position.

Vertical adjustment can be made before or AFTER installation has been completed.



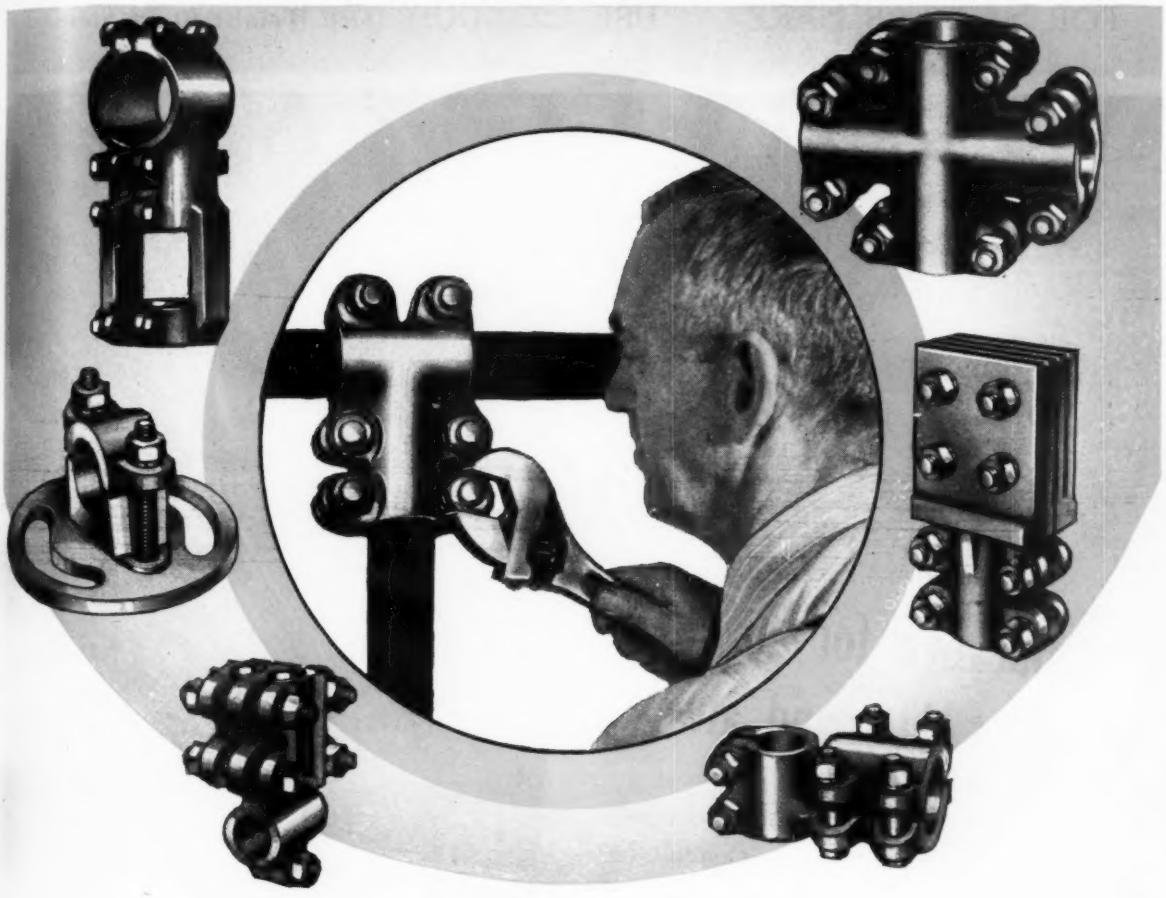
Duo-Cam Hanger hinges or releases louver by simple finger tip pressure.

Hinged Envelope Frame locks glass securely in metal envelope, permits access to troffer interior without removing glass.

TROFFERS by

Smithcraft
LIGHTING DIVISION
CHELSEA 50, MASSACHUSETTS

When you need any **POWER CONNECTOR —**



— *see the Complete line*

Probably the exact power Connector you want is one of the standard Penn-Union items. You will find Tee and Stud Connectors and Solderless Terminal Adapters, Bus Supports, Terminals, Elbows, Cross Connectors, Couplers, Reducers—each in a wide range of sizes, up to the largest.

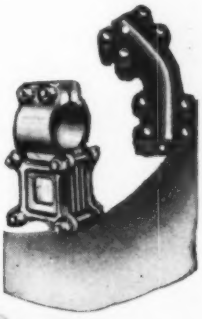
Also the *complete* line of Service Connectors, Cable Taps, Straight and Parallel Connectors, Grounding Clamps—every good type of conductor fitting. Penn-Union connectors are the first choice of experienced users, because of their *known dependability*, mechanically and electrically.

PENN-UNION ELECTRIC CORPORATION, Erie, Pa.

BEN K. PATTON
Gulf Sales Agency
504 Delta Bldg.
New Orleans, La.

L. MORRIS LANDERS
315 Walton Bldg.
Atlanta, Ga.

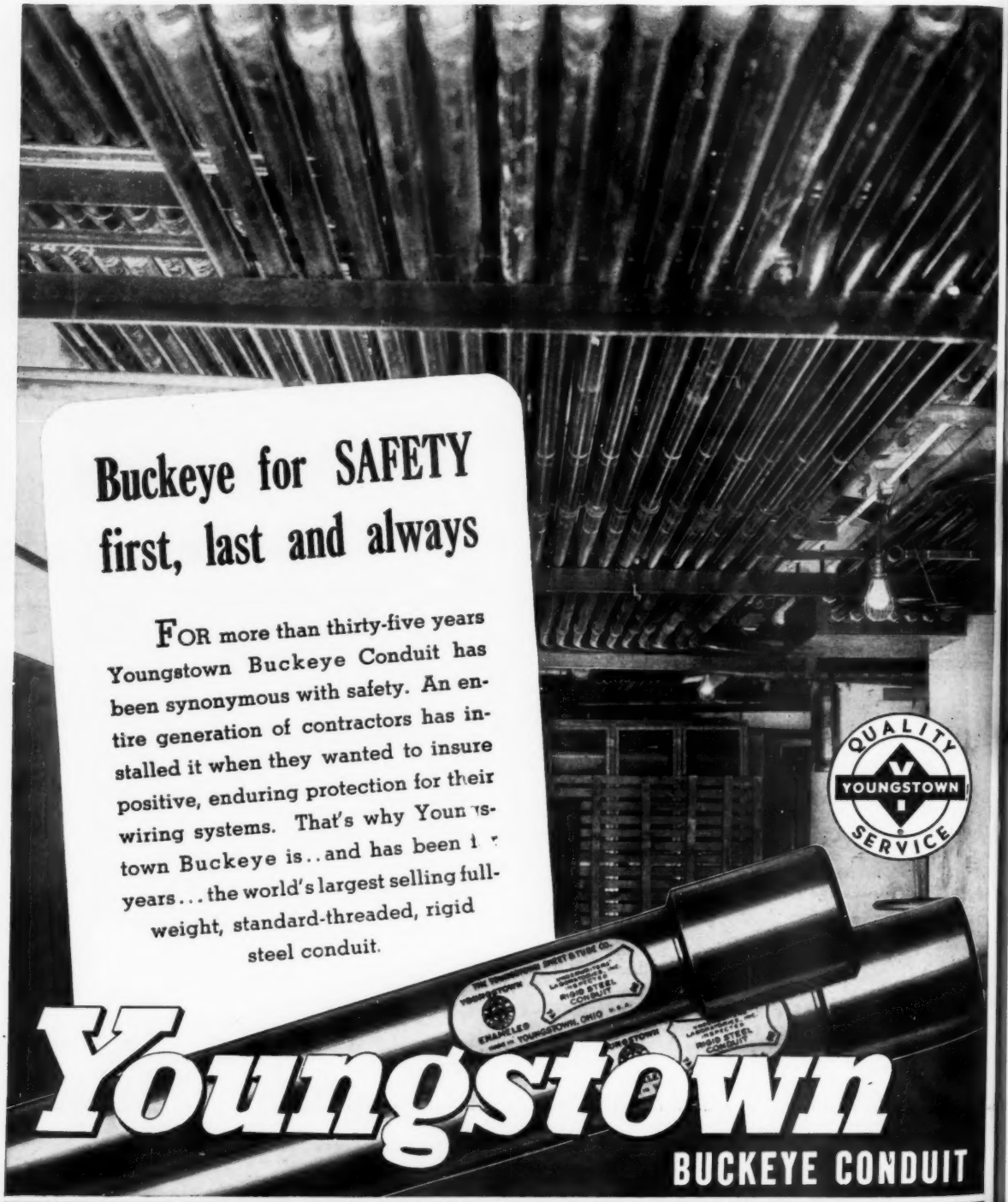
WALTER J. HUEMMER
Dallas Transfer & Term. Wareh. Bldg.
Dallas, Texas



THE *Complete* LINE OF CONDUCTOR FITTINGS

PENN-UNION

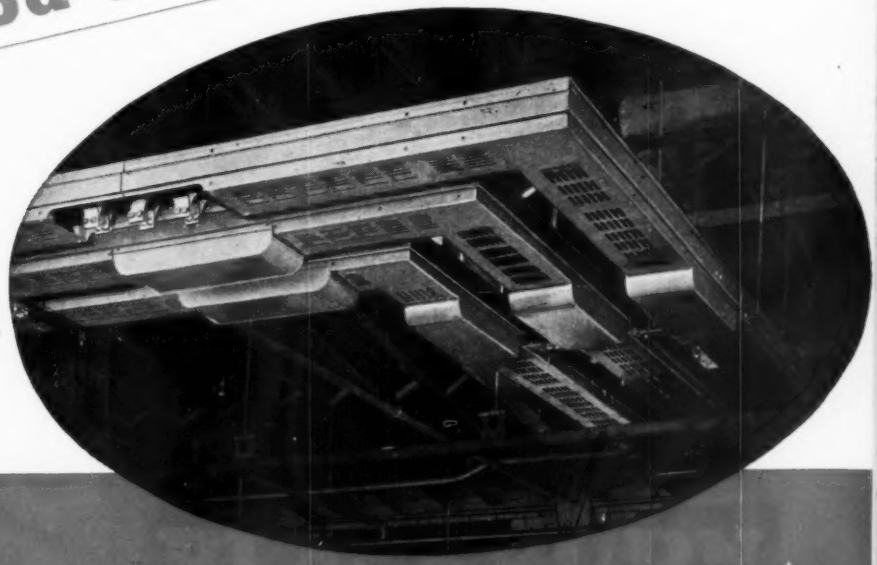
FOR SAFETY'S SAKE . . . USE CONDUIT *(Full Weight Rigid Steel)*


Buckeye for SAFETY
first, last and always
FOR more than thirty-five years Youngstown Buckeye Conduit has been synonymous with safety. An entire generation of contractors has installed it when they wanted to insure positive, enduring protection for their wiring systems. That's why Youngstown Buckeye is..and has been for years... the world's largest selling full-weight, standard-threaded, rigid steel conduit.
QUALITY
YOUNGSTOWN
SERVICE
Youngstown
BUCKEYE CONDUIT

THE YOUNGSTOWN SHEET AND TUBE COMPANY
General Offices — Youngstown 1, Ohio
Manufacturers of Carbon, Alloy and Yoloy Steel
Export Office - 500 Fifth Avenue, New York
PIPE AND TUBULAR PRODUCTS - CONDUIT - BARS - RODS - COLD FINISHED CARBON AND ALLOY BARS - SHEETS - PLATES - WIRE - ELECTROLYTIC TIN PLATE - COKE TIN PLATE - TIE PLATES AND SPIKES

It's good electrical practice...

to use low voltage drop busways for carrying heavy currents long distances.



to provide for future changes in location of equipment with a *flexible* busway system — Trumbull LVD (Low Voltage Drop) FLEX-A-POWER.

Designed to hold down power losses through precise control of voltage drop, LVD FLEX-A-POWER is the flexibly efficient artery of your power distribution system. It is shipped completely prefabricated and, hence, is easy to install. Standardized construction makes it possible to move the entire feeder system to new locations. With sections no longer than 10 feet, cable tap boxes are easily installed at joints to feed any load it may be necessary to add.

Main or secondary feeder systems, safety switches or switchboards, motor control or control centers . . . it's always good electrical practice to specify Trumbull, the name that safeguards *your* safe practice. THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn. Other factories and offices throughout the United States. Foreign representation.

MEN WHO OBSERVE THE BEST PRACTICES MAKE IT A PRACTICE TO USE **TRUMBULL**

TRUMBULL (T) ELECTRIC

One of a series *of messages to help you increase your understanding of business paper advertising, and its effect on your job.*

What's so glamorous about advertising?

THERE IS A curious belief in some quarters that advertising lives in a glamorous and almost occult world of its own, quite insulated against the cold science of the production line.

That, of course, is pure Hollywood.

Advertising today (in the *business* press, at least) is about as glamorous as a drop forge, and twice as efficient. It can become just as important to your profit-and-loss picture as plant maintenance, safety engineering, production techniques or cost-accounting. Maybe even a little more so.

Because the biggest plant capacity, and the best production know-how, can't create a single dollar of profit—*not until something is sold.* And selling, in our economy, is a mass production job!

Advertising simply provides the necessary machinery. It is the application of assembly line methods to the *manufacture of a sale.* For sales don't just "happen." Like any other commodity, they require a series of processing operations. Usually, it takes five:

1. **Seeking out prospects**
2. **Arousing their interest**
3. **Creating a preference for your product**
4. **Making a specific proposal**
5. **Closing the order**

By *mechanizing* the first three of these operations, advertising enables your salesmen to concentrate on the two jobs which they alone can do, and do best. And nowhere does the machinery of advertising work more efficiently than in the business press, where it reaches the greatest number of interested prospects, at the lowest possible cost.

Maybe – to the man who appreciates machinery – advertising is a pretty glamorous business, at that!

ELECTRICAL SOUTH

is a member of The Associated Business Papers, who have just published a book entitled, "Copy that Clicks – with readers." *Next time you see your advertising manager, ask him to show it to you. And if you'd like a copy of your own, we'll be glad to mail you one.*

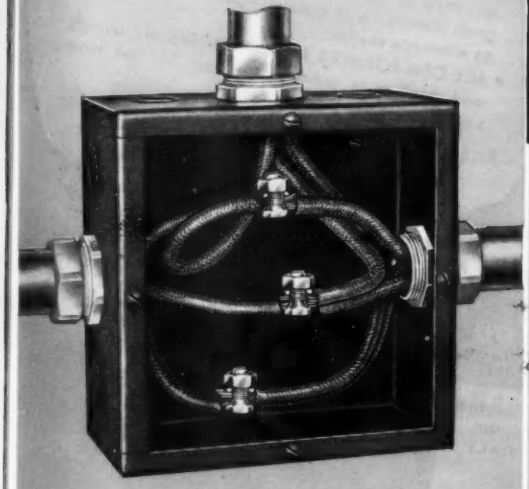
The Best Way

TO MAKE TAPS AND CONNECTIONS-

Blackburn is Listed by Underwriters for Inside Wiring

HANDIEST!--- MOST ECONOMICAL!

BLACKBURN *Hi-Strength* CONNECTORS



Tap made in junction box with Blackburn Hi-Strength Connectors

Millions in Use Throughout the World

The UNIVERSAL connector—ideal for any use.

The HANDY connector—very easy to use.

The ECONOMICAL connector—low initial cost plus labor saving.

The COMPACT connector—small, easy to tape.

The RELIABLE, PERMANENT connector—made of DURONZE, 50% stronger than hard copper or commercial bronze. High strength, at no extra cost!

Listed by Underwriters.

•

ORDER FROM YOUR JOBBER
WRITE FOR SAMPLES AND NEW CATALOG

JASPER BLACKBURN PRODUCTS CORP., First, Madison & Clinton Sts. • St. Louis 6, Mo.

BUILDERS OF QUALITY PRODUCTS FOR 15 YEARS

IMMEDIATE DELIVERY ON MOTOR REPAIR MATERIALS!

IWI one stop service saves you time and money

VARTEX CLOTH AND TAPE

. . . The Peak of Quality!

- Made from finest cotton and insulating varnish
- Flexible at any temperature
- Easy workability
- High dielectric property
- Great mechanical strength
- Resists oil, acid and alkali
- Stands up under heat, moisture, abrasion
- Always uniform and dependable
- All sizes and thicknesses in stock

Protects Against Failures and Comebacks
Write For Samples and Prices

ACE SHOP EQUIPMENT

. . . Ace High in Service!

- Fast, flexible, rugged for heavy duty jobs
- Adaptable for all average size coils
- Adjustments are quick and easy
- ACE WINDERS are extra powerful to pull the heaviest wire for the largest coils in their range—will take all types of winding heads—have non-grab lifetime clutch control—gear and belt drives to eliminate chatter
- ACE COIL FORMERS AND SPREADERS are smooth and positive in action—are built for the most severe service

An Investment in Better Work and Bigger Profits
Write For Illustrated Catalog

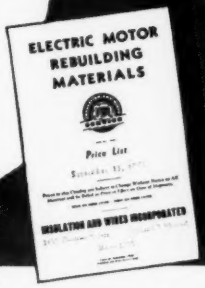
MACALLEN MICA

...It Has What it Takes!

- Most popular of all mica
- Better dielectric strength than any other insulating material
- Extremely flexible but extra strong
- Unaffected by heat and temperature
- Great resistance to moisture, oil, acids, alkalies and solvents
- Always accurate sheets of any thickness or size for mounting, cold forming segments, or in all other forms for every need

The Best For All Top Quality Jobs
Write For Samples and Prices

One Order . . . One Shipment . . . Gets You Everything You Need Faster and Easier.



Free

IWI BLUE CATALOG

A complete catalog of hundreds of motor repair items every shop needs—indexed for easy finding, easy ordering. Send For Yours *Today!*

Distributed by

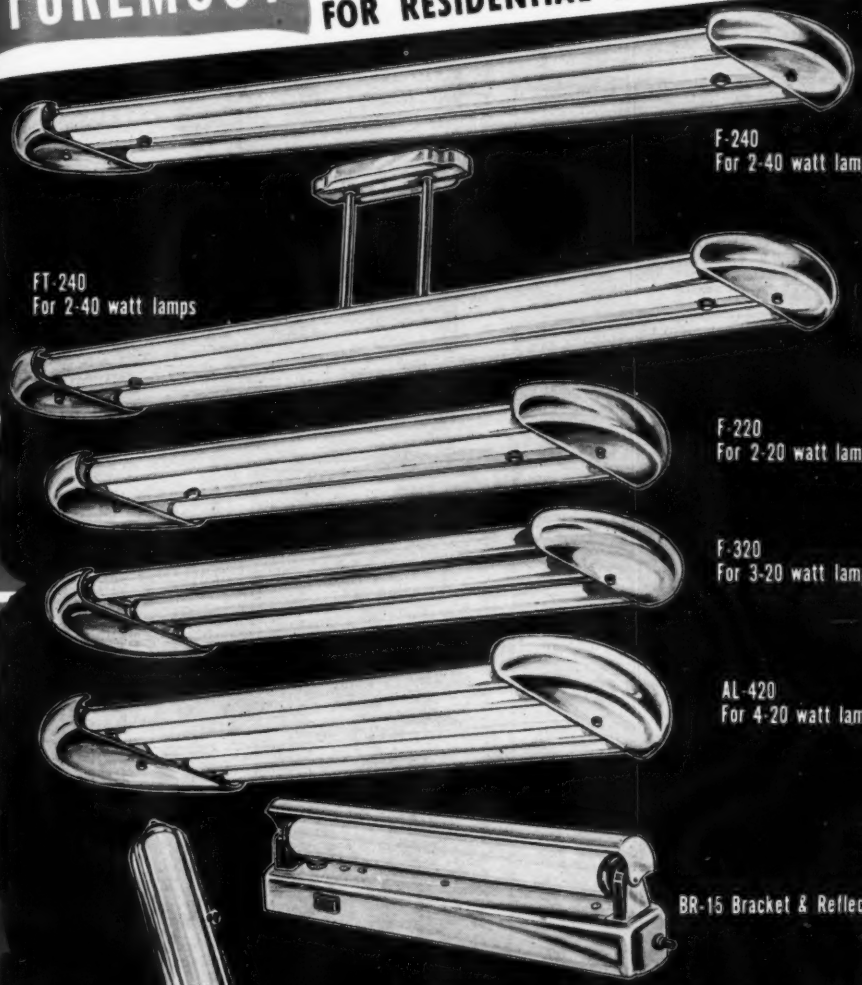
INSULATION AND WIRES INCORPORATED

Offices and Warehouses in: ST. LOUIS 3, MO. • ATLANTA, GA. • HOUSTON 3, TEXAS

KEYSTONE'S new lighting fixtures are

FOREMOST *in the Modern Trend*

FOR RESIDENTIAL & COMMERCIAL INSTALLATIONS



F-240
For 2-40 watt lamps

FT-240
For 2-40 watt lamps

F-220
For 2-20 watt lamps

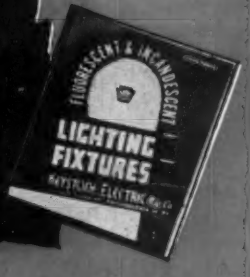
F-320
For 3-20 watt lamps

AL-420
For 4-20 watt lamps

BR-15 Bracket & Reflector

15B

SEND FOR NEW CATALOG



QUALITY PRODUCED IN QUANTITY means LOWER PRICES to YOU! These eye-catching Keystone creations have definite sales appeal. Precision engineered for perfect performance. Finished in polished aluminum and baked white enamel. Fixtures feature easy installation and simple maintenance. Prompt delivery. Write today!

KEYSTONE ELECTRIC Manufacturing Co.

Essentially Better Lighting

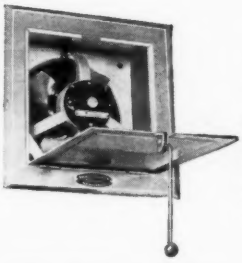
KEYSTONE ELECTRIC MFG. CO.

DEPT. C, 2228-36 E. TIOGA ST., PHILADELPHIA 34, PA. CABLE ADDRESS: KEYLECT, PHILA., PA.

AIR EQUIPMENT TO HELP YOUR BUSINESS

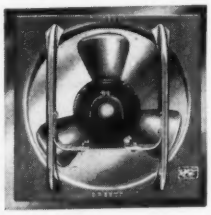
3 ways to build GOODWILL and PROFITS

—with "Buffalo" Fans



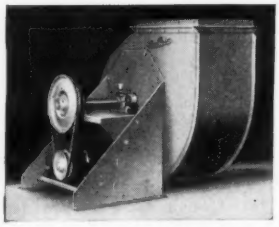
1. Kitchen Ventilation

A very popular and much-needed home unit, the "Buffalo" 8″ kitchen fan! A slight pull on the enameled handle opens inside and outside doors, starts motor — drawing out kitchen odors, vapors, heat — quietly and at trifling power cost. An easy fan to sell, year-'round. Write for data and prices!



2. "Spot" Ventilation in STORE or PLANT

"Buffalo" Breezo Fans are easily installed in walls where needed — give top performance at lowest cost . . . long-lived service with minimum maintenance.



3. Central Ventilation

"Buffalo" Belted Vent Set — potential profit leader for you! An efficient, versatile fan installed indoors or out, with easily-changed pulleys to vary capacity as needed.

Write for Bulletin 3222-F and prices

BUFFALO FORGE COMPANY

210 Mortimer Street Buffalo, N. Y.
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Branch Offices in all Principal Cities

FANS by "Buffalo"

ALL BUFFALO DISK FANS CARRY THIS LABEL; YOUR GUARANTEE OF CERTIFIED RATINGS.

CUTTING AIR COSTS IN EVERY BRANCH OF INDUSTRY

A Complete Line of Electrical Fittings!

Malleable Iron means a lot in reducing installation time

ASK YOUR WHOLESALER! Smooth fit—that can be the difference between just breaking even and good profits on a job. No wasted time forcing or cleaning obstinate fittings. GEDNEY Fittings . . . *fit* because they're made of high grade malleable iron. They have smooth finish inside and out, with clean, accurate threading. Next time, start your wiring job right—install GEDNEY Fittings. Your wholesaler has them in stock.

GEDNEY FITTINGS

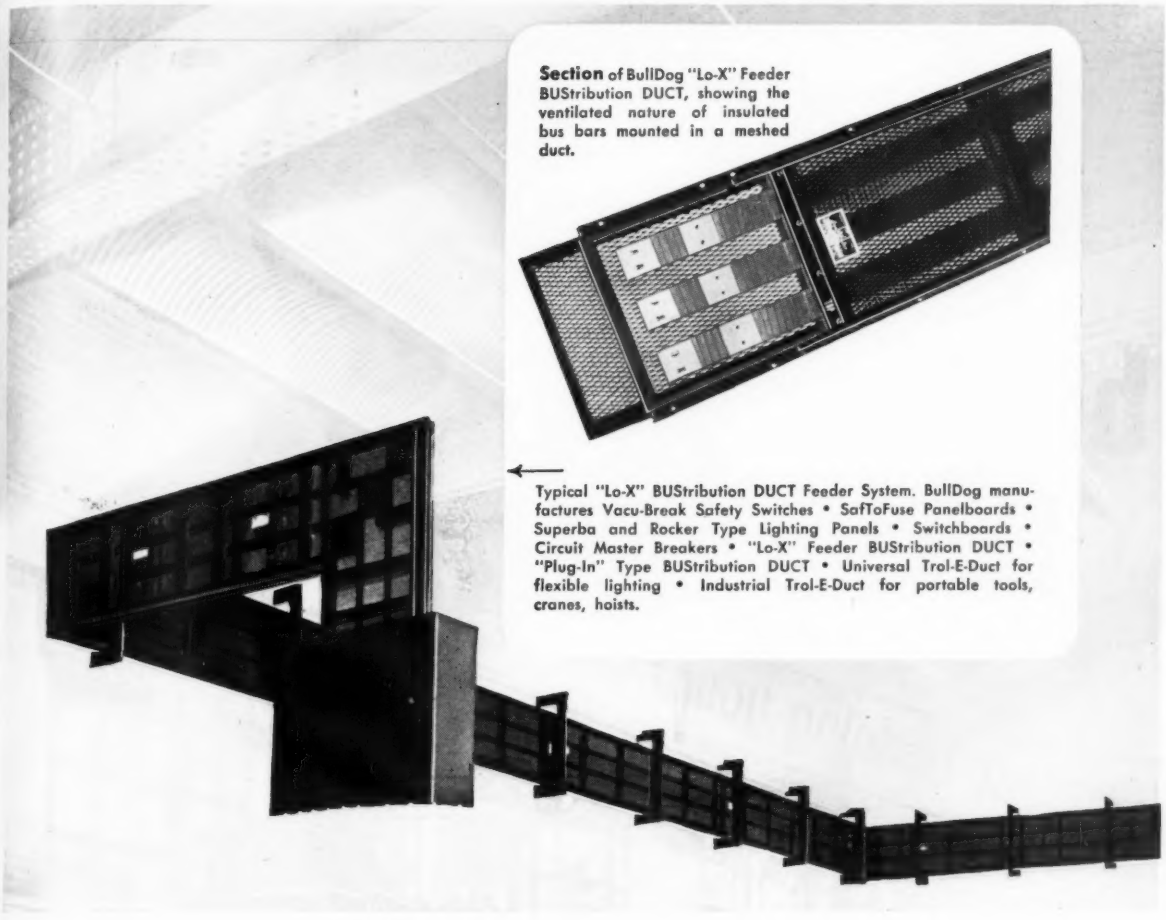
WRITE FOR THE CATALOG!

It's all there—every GEDNEY item clearly indexed, with every size and type for your job. This manual will save you plenty of time because it has been made up to give you information . . . fast! Send for your copy today; write on letterhead.

GEDNEY ELECTRIC CO.

RKO BLDG., RADIO CITY, NEW YORK 20, N. Y.

FACTORY & SHIPPING POINT: TERRYVILLE, CONN.



Section of BullDog "Lo-X" Feeder BUStribution DUCT, showing the ventilated nature of insulated bus bars mounted in a meshed duct.

Typical "Lo-X" BUStribution DUCT Feeder System. BullDog manufactures Vacu-Break Safety Switches • SafToFuse Panelboards • Superba and Rocker Type Lighting Panels • Switchboards • Circuit Master Breakers • "Lo-X" Feeder BUStribution DUCT • "Plug-In" Type BUStribution DUCT • Universal Trol-E-Duct for flexible lighting • Industrial Trol-E-Duct for portable tools, cranes, hoists.

How to make power toe the line

BRING electricity into line the modern, efficient way with BullDog "Lo-X" BUStribution DUCT.

The ventilated casing and bus bar arrangement of "Lo-X" BUStribution DUCT make it carry electricity more efficiently. Ventilation beats conductor heating by dissipating heat into the air. Closely spaced paired-phase bus bars hold voltage drop to a minimum by reducing reactance. Resulting full power and low temperature rise assure peak efficiency of electrical equipment.

Long, efficient life

Conductors in "Lo-X" Duct use air as their main dielectric. They are mounted on porcelain insulators and individually wrapped with insulating tape to prevent the possibility of electrical failure. This means a long, efficient life for your electrical system.

"Lo-X" Duct comes in standard, prefabricated ten-foot lengths, in capacities up to 4000 amperes . . . adaptable to almost any industrial power distribution need. Standardization and prefabrication means *known* performance, even before installation. Also means complete salvability of your system in event of plant changes.

Remember this: Underpowered equipment means poor performance. Your feeder system may be costing you dollars . . . *right now.*

Get technical details from a nearby BullDog Field Engineer. He'll gladly answer your questions and show you a typical installation near your own plant.

BullDog's Field Engineers welcome the chance to sit in on the planning stages of a building project. Their knowledge of electrical distribution layout can mean savings in installation and maintenance costs, as well as highest efficiency and reliability in actual operation. Why not take advantage of this pre-building service?

BULLDOG ELECTRIC PRODUCTS COMPANY

DETROIT 32, MICHIGAN • FIELD OFFICES IN ALL PRINCIPAL CITIES

IN CANADA: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO

BULLDOG

HEADQUARTERS FOR ELECTRICAL DISTRIBUTION

give him a **bigger bonus**

without budging your budget!

Sure he's happy—and you are, too.

He was expecting a $75 bonus. Then you decided to give the bonus in U. S. Savings Bonds. So he receives—not $75—not a $75 Bond—but a $100 Bond.

It looks like more—and it *is* more. Not just because every $3 put into Savings Bonds will pay $4 at maturity. These Bonds are builders of future security for employees and for the nation as well (which means for business). They're a powerful weapon against inflation. They make employees "holders of shares in America"—thus build enthusiasm for our traditional competitive system.

They pay *your company* a bonus, too—in increased employee contentment, which shows up as less turnover, reduced absenteeism, fewer accidents! All these benefits are being proved and re-proved every day in thousands of companies that operate the Payroll Savings Plan—the popular plan for the regular purchase of Savings Bonds by employees.

You're helping your employees, your country, and yourself by deciding to...

give the bonus in Bonds

...and by putting plenty of push behind the P. S. P. It's easy with the help you get—for the asking—from your State Director, U. S. Treasury's Savings Bonds Division. Call him now!

The Treasury Department acknowledges with appreciation the publication of this message by

ELECTRICAL SOUTH

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and the Advertising Council.

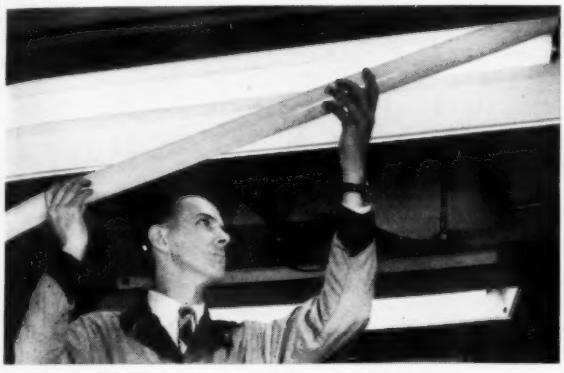
NOW!

Plenty of fluorescent lamps!

Two new fluorescent lamp colors!

A new 85-watt fluorescent lamp!

...ALL FROM G-E



1. SELL NEW LIGHTING JOBS—FILL EMPTY SOCKETS! For the first time ever, you can get all the General Electric fluorescent lamps you want—to sell new installations and help your customers bring their lighting back to peak efficiency. So stock up on G-E fluorescent lamps today and start making those extra sales right away.

2. FOR NEW FLUORESCENT LIGHTING EFFECTS, use these two new General Electric fluorescent colors. New G-E "soft white", developed after years of research with hundreds of color combinations, provides subtle flattery for complexions, foods, and surroundings. New G-E "warm tint" gives color values similar to incandescent light.

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GENERAL ELECTRIC

For Planned Lighting Profit Sales

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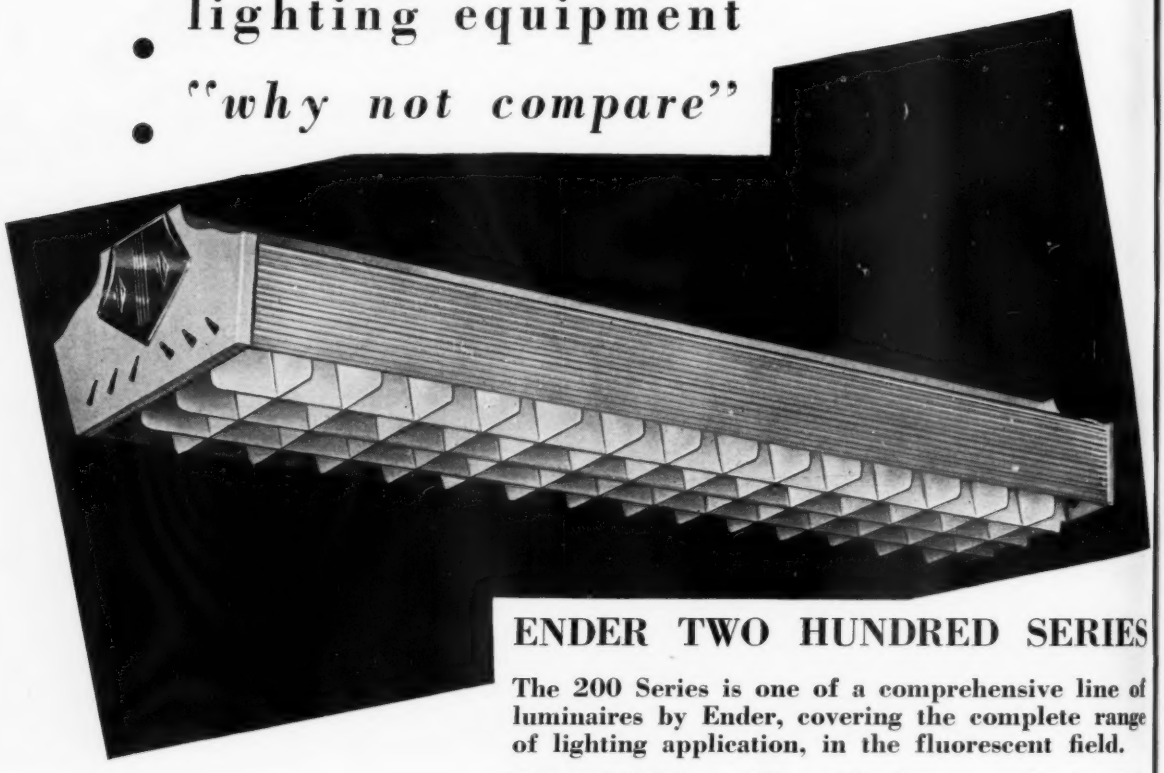
- **precision built— lighting equipment**
- ***"why not compare"***



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Underwriters approved and Union wired

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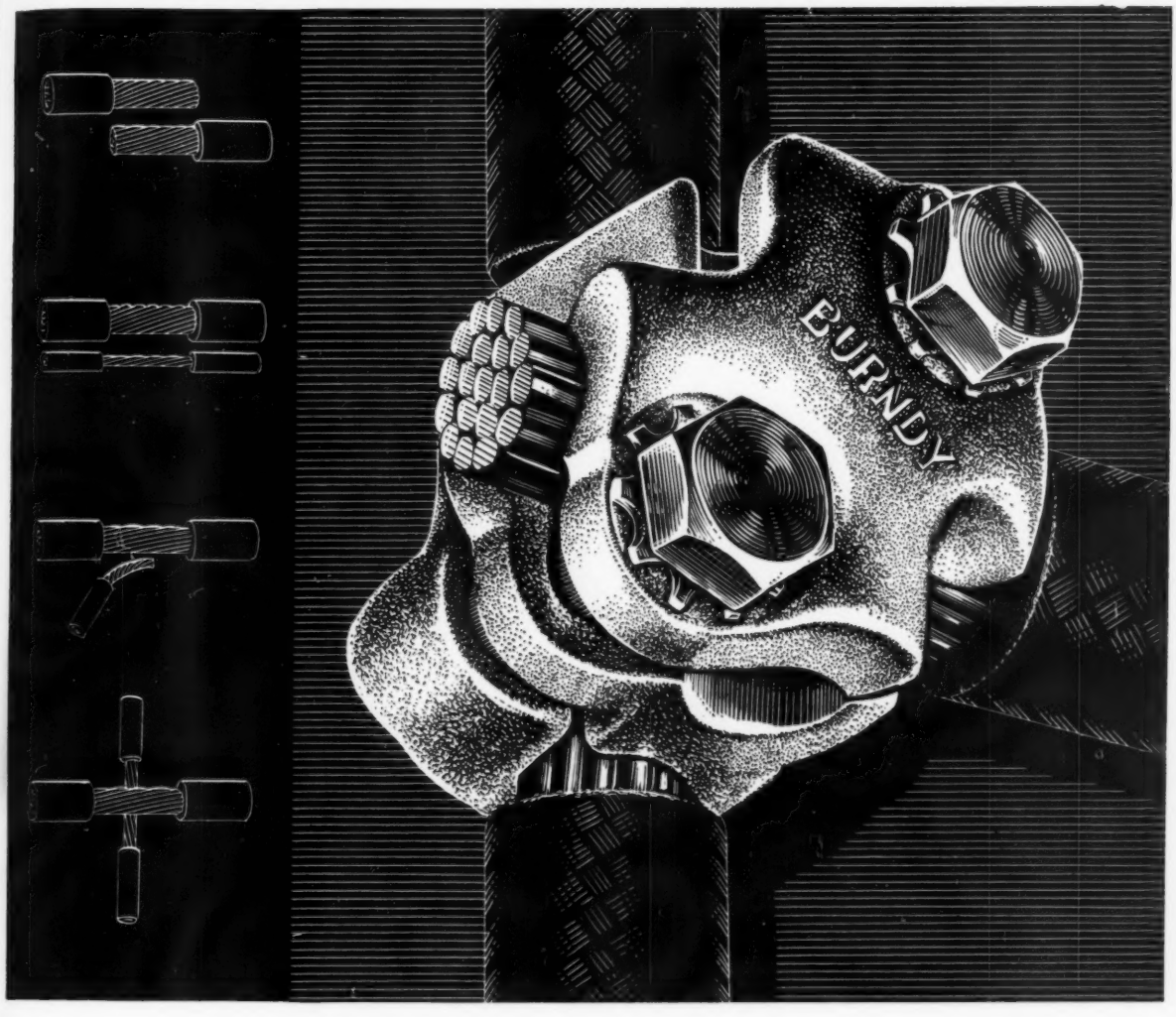

*Burndy Versi-Tap**. . . the versatile connector that makes short work of tee, tap, cross, or end connections. Each size accommodates a wide range of wires or cables in each clamping groove; so a few sizes on hand will take care of almost any combination of cables. Combines high strength and high electrical efficiency. Connects with ordinary wrench and tapes easily because of compactness and rounded corners. Sizes for conductors from No. 6 str. to 1000 Mcm. For full details ask for catalog 41; and remember, for versatility and economy, it pays to

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Lighting sales *GOING UP* with FEDERAL Cell-Ceil* Installations

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Foyers, display rooms and offices are taking on new life and glowing beauty with the application of Federal Cell-Ceil, the most modern lighting treatment. And, these installations are pushing lighting sales higher every day.

This beautiful overall ceiling louvering is easy to install. The light-weight sturdy hanging mechanism developed for Cell-Ceil not only speeds up application but provides such easy access for relamping and cleaning that continued customer satisfaction is assured.

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Increase your lighting sales—be ready to deliver Federal Cell-Ceil now! The Federal engineering staff will gladly advise on any installation problem. Our technical bulletin on installation techniques is also available, address Dept. CC-3.

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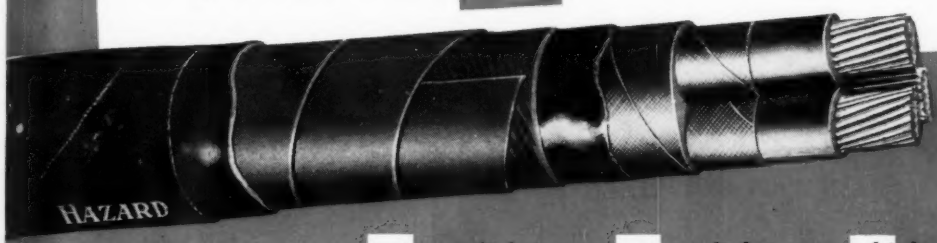
SAVE 4 WAYS WITH HAZARD ARMORTITE CABLE ON THESE 6 IMPORTANT JOBS:



airport lighting . . . street lighting . . . highway lighting . . .
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Lower initial cost. Because Armortite Cable requires no costly lead sheath or metal armor for protection, you make substantial savings on the purchase of cable.

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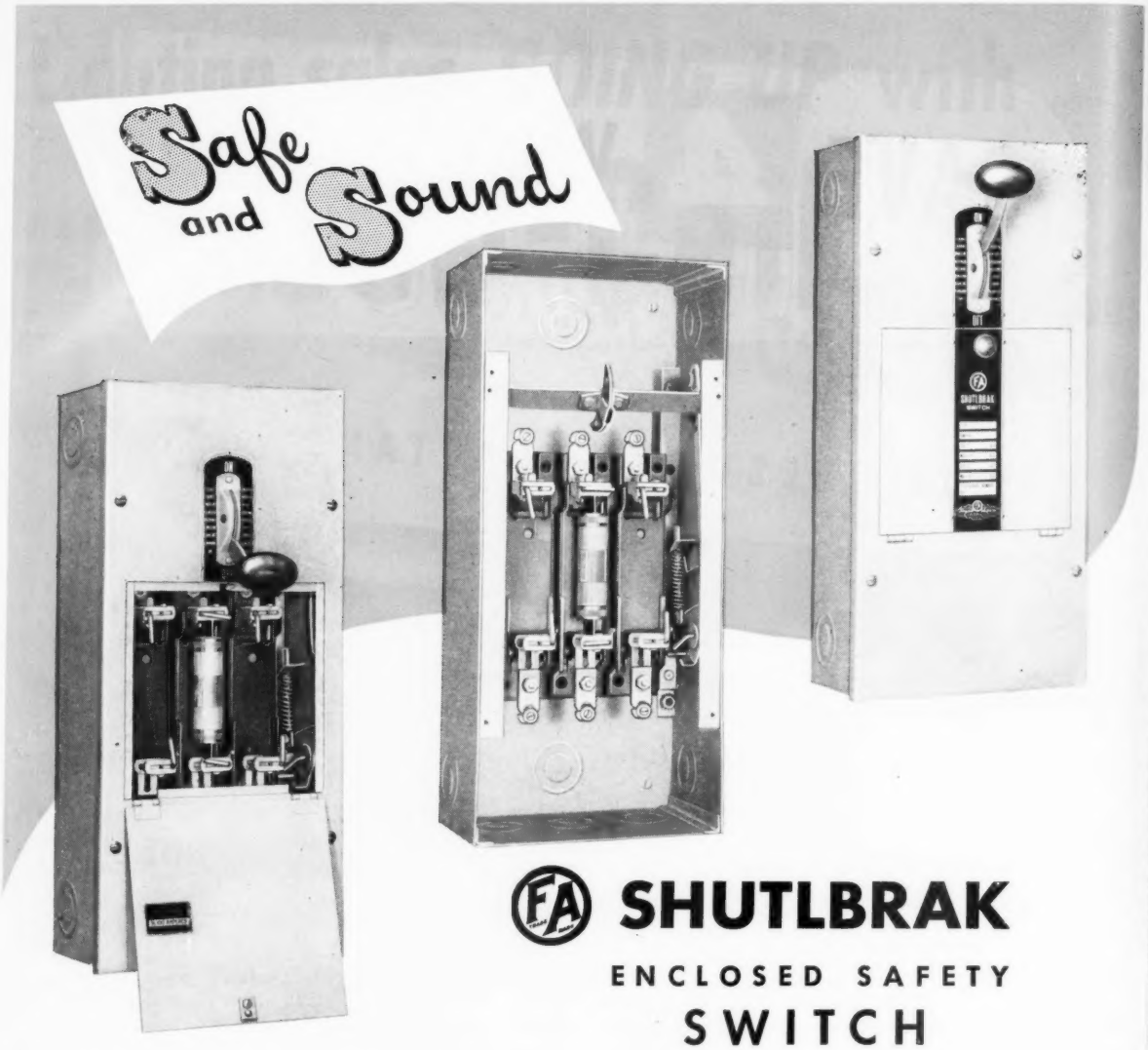
Long, trouble-free service. Years and years of experience have proved that you can forget Hazard Armortite Cable, once it's buried. It continues to carry the load day in and day out with none of those costly, annoying service interruptions. Since 1926, Armortite has set records for long, trouble-free underground cable service. And today, it is made with another improvement that will extend this service even longer. Okobestoprene Tape (asbestos fibres compounded with neoprene) is wrapped over the insulated conductors instead of braid. This provides an additional seal against possible wicking-in of moisture at terminals or joints . . . extra resistance to mildew, acids, flame or alkali . . . permanent circuit identification.

For all the details about this outstanding underground cable, ask your Hazard representative or write Hazard Insulated Wire Works, Wilkes-Barre, Pa.

HAZARD

8860

insulated wires and cables for every electrical use



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ENCLOSED SAFETY SWITCH

YOU'LL FIND ALL THE REQUIREMENTS for safety and dependability in the improved FA Shutlbrak Switch. It's a high quality, heavy duty industrial switch that is ideal for motor control, service entrance or for any job requiring an operating switch that is *safe and sound.*

This safety type FA Shutlbrak Enclosed Switch has the popular safety feature of interlocking fuse doors. The fuse compartment doors automatically lock when the current is "on"... fuses being accessible only when the switch is "off." (An intermediate position of the operating handle permits access by an authorized person.)

Embodying the latest in design and construction, the FA Shutlbrak Switch gives long-lasting, economical service... principally because of its split-second speed of operation; its new shuttle mechanism that gives quick make and break connections; heavily silvered copper contacts that roll under pressure and actually improve with use; and new clamp-type fuseholders and solderless pressure connectors that assure years of trouble-free service.

Add up all of these features and it's easy to see why the FA Shutlbrak Switch is dubbed *safe and sound.*

Capacities: 30 to 1200 amps., 250 volts AC or DC; and 575 volts AC in 2, 3 and 4 poles. See your FA Representative for more details or write for Bulletin No. 501.

Frank Adam Electric Co.

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ELECTRICAL SOUTH

VOL. 28 NOV. 1948 NO. 11

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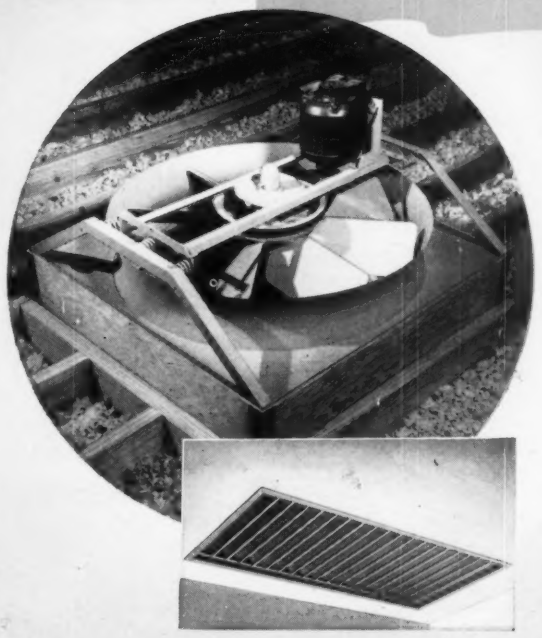
Short Cut to Profits

WITH THE NEW-TYPE

Coolair TRADE MARK ATTIC FAN PACKAGE



CUTS INSTALLATION COST . . .
This New-Type Attic Package is far easier and quicker to install . . . cuts labor time right down to the bone.

CUTS OVERALL SELLING PRICE . . .
Package is complete, including fully *automatic ceiling shutter.* Total installed cost is far less than for ordinary fans.

CUTS SELLING EXPENSE . . .
Lower installed cost and a choice of SIX SIZES mean easier selling. Authorized Coolair Dealers receive factory-supervised training, too.

CUTS SERVICE CALLS . . .
SKF ball bearings and patented sound-absorbing springs mean quieter operation and better satisfied customers.

● Cut yourself a slice of extra profits as an Authorized Coolair Dealer . . . call your Coolair distributor or agent for details.

Coolair is a charter member of PFMA and Coolair fan ratings are certified.

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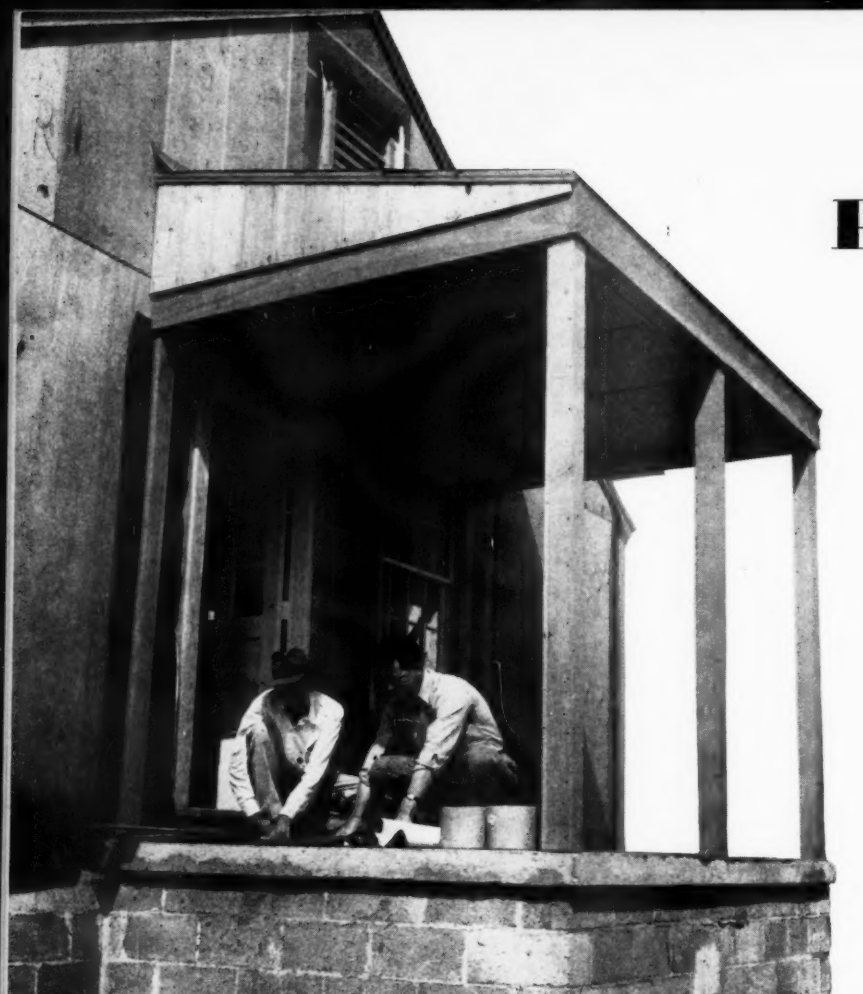


PLANNING

THE INDUSTRIAL Electric Service of Morristown, Tennessee, wired 101 two and three-bedroom houses in the Cherokee Subdivision in 101 days with a two-man crew; eliminated more than half of the usual detail; never once delayed another craft, and at the same time made a good profit.

All because the job was adequately planned in advance and because two top-notch electrical craftsmen were given the blueprints and told to go ahead.

The job consisted of 101 pre-fabricated houses selling for $7200 to $7800, and representing a retail value of $800,000. There were four different types of houses, which eliminated any opportunity for prefabricating the wiring or cutting lengths and wiring in boxes on a production line basis. Each house is wired for electric water heater, electric range, electrically controlled oil furnace, ceiling lights, wall plugs, and wall switches. Non-metallic cable was specified for the wiring and the service was 110-220 volts, three-wire. Service entrance was conduit to 60 ampere fuse boxes using No. 6 wire to box.

Boyd O. Jones, owner of the Industrial Electric Service, planned all the details in advance. The general contractor is Whelen Construction

(Below) Industrial Electric Service wired 101 units like these, selling for $7200 to $7800, in 101 days with a 2-man crew. Careful planning held man-hours down.

(Above) Boyd O. Jones, at right, owner of the Industrial Electric Service, Morristown, Tenn., studies prints with the general contractor's superintendent.

AHEAD FOR PROFIT

by L. H. Houck

Company, Inc., Nashville, and Joe Irving is general superintendent.

Realizing that much time is lost on such jobs by having men report to the shop for instructions and to get tools and materials, Jones decided to elminate all of that. After getting the blueprints and making up the material lists, he ordered all material delivered to the job. He built a shack on the job, an outlay of about $200, for housing materials, tools, and as a headquarters for the electricians. He assigned the job to two of his best craftsmen, Miles A. Brady and Wm. M. Jenkins.

In outlining the job to them, he stressed the fact that they were competent to take the job and complete it and that was what he wanted. He told them that he did not want men who had to be told what to do or who had to be constantly hunting him up to ask questions.

"The material is on the job," he said, "here are the blueprints. The job has to move along if we're going to make a profit, and we must not delay any other craft."

All wires were soldered and taped, and all runs and practices were subject to inspection specifications.

On this basis the two-man crew roughed in two houses a day from the first day on. Hanging fixtures and finish-up work completed the job, bringing in a record of 101 houses in 101 days through the efforts of two men.

Boyd Jones' thorough planning eliminated all trips of the men to the home office, all telephone calls to the office, all the office and shop expense of handling the materials for 101 houses, and all but eight hours of Jones' time in supervising. He estimates he spent eight hours on the job during the 101 working days. The job was all done at regular time, 40 hours per week, and no overtime was worked or needed.

There have been no changes in wiring, no tearouts or mistakes, and no craft working for the general contractor met with troublesome delays.

The two-man crew was in constant contact with the other crafts and with the general superintendent. By having all their material on the job and being in complete charge of the job with full responsibility, they were always able to drop what they were doing in one house and go to another house in order to co-operate with other crafts and also prevent themselves from being sewed up on any portion of the wiring they were doing.

Jones said that the records of the job show that the men always had the wiring in place at the most advantageous time—the time when it can be put in with the least labor and expense—definitely a factor in profit-making.

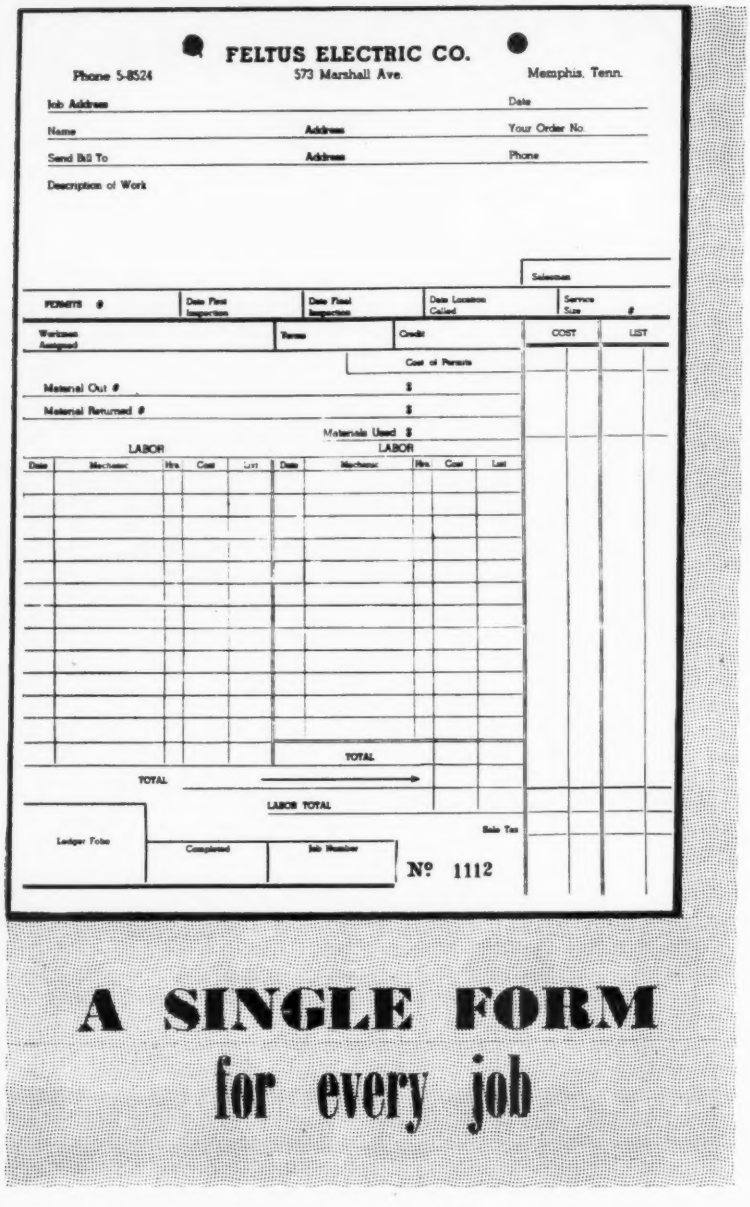
Jones is now figuring on using the same system on a 400-house contract which he has under consideration.

Industrial Electric Service handles any kind of wiring contract and makes electrical installation and wiring for any kind of industrial machinery or equipment.

"The only way you can be sure of delivering a good job," Jones said, "is to make certain that none but fully trained craftsmen are employed. They

(Continued on page 43)

According to Boyd O. Jones, "I can sell a two-thousand-dollar job in the time it takes to show an unskilled workman what to do." At right are Jones' two ace electricians installing non-metallic cable.



FELTUS ELECTRIC CO.

Phone 5-8524 — 573 Marshall Ave. — Memphis, Tenn.

Job Address — Date

Name — Address — Your Order No.

Send Bill To — Address — Phone

Description of Work

Salesman

PERMITS # | Date First Inspection | Date Final Inspection | Date Location Called | Service Size #

Workmen Assigned | Terms | Credit | COST | LIST

Cost of Permits

Material Out # $

Material Returned # $

Materials Used $

LABOR

Date	Mechanic	Hrs.	Cost	List

TOTAL

LABOR TOTAL

Sale Tax

Ledger Folio | Completed | Job Number

Nº 1112

A SINGLE FORM for every job

by Robert A. Latimer

A SIMPLIFIED job form, giving the complete history on any type of electrical installation from a small repair to complete wiring of a large industrial plant, has proven to have many advantages for Feltus Electric Company, in Memphis, Tennessee, headed by R. E. Feltus, Sr., president and founder of the firm.

Feltus Electric Company, like many other southern contractors, formerly had a variety of forms to distinguish between industrial work, repair work, lighting fixture installation, etc. These proved far too cumbersome, according to David Feltus, and quite often represented a wasteful duplication of effort and too much needless expenditure of time.

The solution has been a single, comprehensive form which Mr. Feltus developed shortly after the close of the war. The form is a 3-sheet unit, which the company has titled merely "Job Form." Numbered in sequence, blanks are kept at the "dispatch office" at the front of the building, where all incoming calls are received. The same form, once an original entry has been made, follows through the entire process, and may be handled by as many as a dozen different people, according to Mr. Feltus.

The form is headed at the top with spaces for the job address, state, name and address, order number, person to whom the bill is to be sent, with address and phone number, and a space for description of work. In this section is also a small box for the name of the salesman who sold the job, if it is lighting fixtures, appliances or work of this type.

Running across the upper mid-section are boxes for permit numbers, the date of the first inspection and final inspection, date location called, and the service required and size, depending, of course, on the nature of the call.

Below is a space for the name of the mechanic assigned to the job, terms, credit, cost of permit, and as one of the most important features, two sections for material out and material returned. To sum up the entire job, when completed, the lower half consists of columns with the date, the name of the mechanic on the job, his hours, cost to Feltus Electric Company, selling cost to the customer, and totals. There is a space for the initials of the supervisor when the job is completed, plus an entry for the ledger folio in which the form records ultimately wind up.

The upper half of the form is filled out by the Feltus Electric Company's secretary who takes in calls, and all three copies pass to Robert Feltus, estimator and electrical engineer, in the drafting office at the rear. From the specifications of the job requested, Robert Feltus makes up the installation drawing, and assigns whatever mechanics are required. The original of the form stays in the office, while the pink sheet goes to mechanics assigned, and the yellow sheet to the file.

The pink sheet, however, before going out on the job is sent to the stockroom, where order-fillers make up a complete shipment of parts to be used on the job, charging each one out on the small form which is attached to the pink sheet.

"We charge out every item used on every job," David Feltus said. "We check them out on a plain white sheet, and credit return of the materials on the same form, which is stamped 'return' in blue. Duplicates of each one of these charge-outs or return-credits are attached to the pink sheet so that at the end of the job,

(Continued on paye 92)

only the best

IS GOOD ENOUGH FOR THIS CONTRACTOR

by Ernest W. Fair

To STAY in business in a small town, a good electrical contractor must install products with the idea that they will be in use for another hundred years, and his customers must know that he follows that practice," declared William Roger, Jr., head of Rogers Electrical Company, 5 South Main, in Sapulpa, a town of 20,000 population in northeastern Oklahoma.

"You can get away with sub-standard installations and the use of substandard materials for a little while in a small city or town, but you can't stay in business over the years if you try to do so," he continued, "and in that sense, being a small-town electrical contractor is a lot more difficult than doing business in a big city.

"It's not a matter of whether or not the contractor can 'get away with it' but simply that small town people will not accept below standard goods or installations. The demand for excellence of workmanship and materials is always higher in small towns than big cities, and I know for a fact that is why so many big town contractors who try set-ups in small towns meet with failure."

Rogers Electrical Company was founded in Sapulpa 28 years ago and operates both the electrical contracting business under its own name and the Buckingham Electric Company at 104 East Dewey St. in Sapulpa, which is primarily an electrical appliance merchandising firm.

The Rogers firm has made most of the commercial installations in and around Sapulpa and by actual check of public records has done the electrical work in 99 out of 100 new homes built in Sapulpa recently.

"There have been times when we felt like tearing our hair out trying to stick to our formula," Rogers explained, "particularly, when it seemed that quality installation materials could not be found anywhere for any amount of money. We worked harder at digging up materials than getting business, and it took a lot of legwork and pleading with our customers for patience in order to pull through this period.

"We have spent all of our advertising money for years hammering away at this policy, and we tell it to our customers at every opportunity. Now, the people here know it is a must on every job we handle, and this policy, and the fact that people know we faithfully follow through on every part of it, is our very best business getter!"

Rogers pointed out that guarantees are also of the utmost importance in electrical contracting work.

"Our motto is, 'We Guarantee Satisfaction'," he stated, "and we have always spent a lot of money carrying out this promise because we have found that it makes good business.

"If there is even the slightest element of dissatisfaction with a job we have finished, we will, without charge, do whatever is necessary to satisfy that customer.

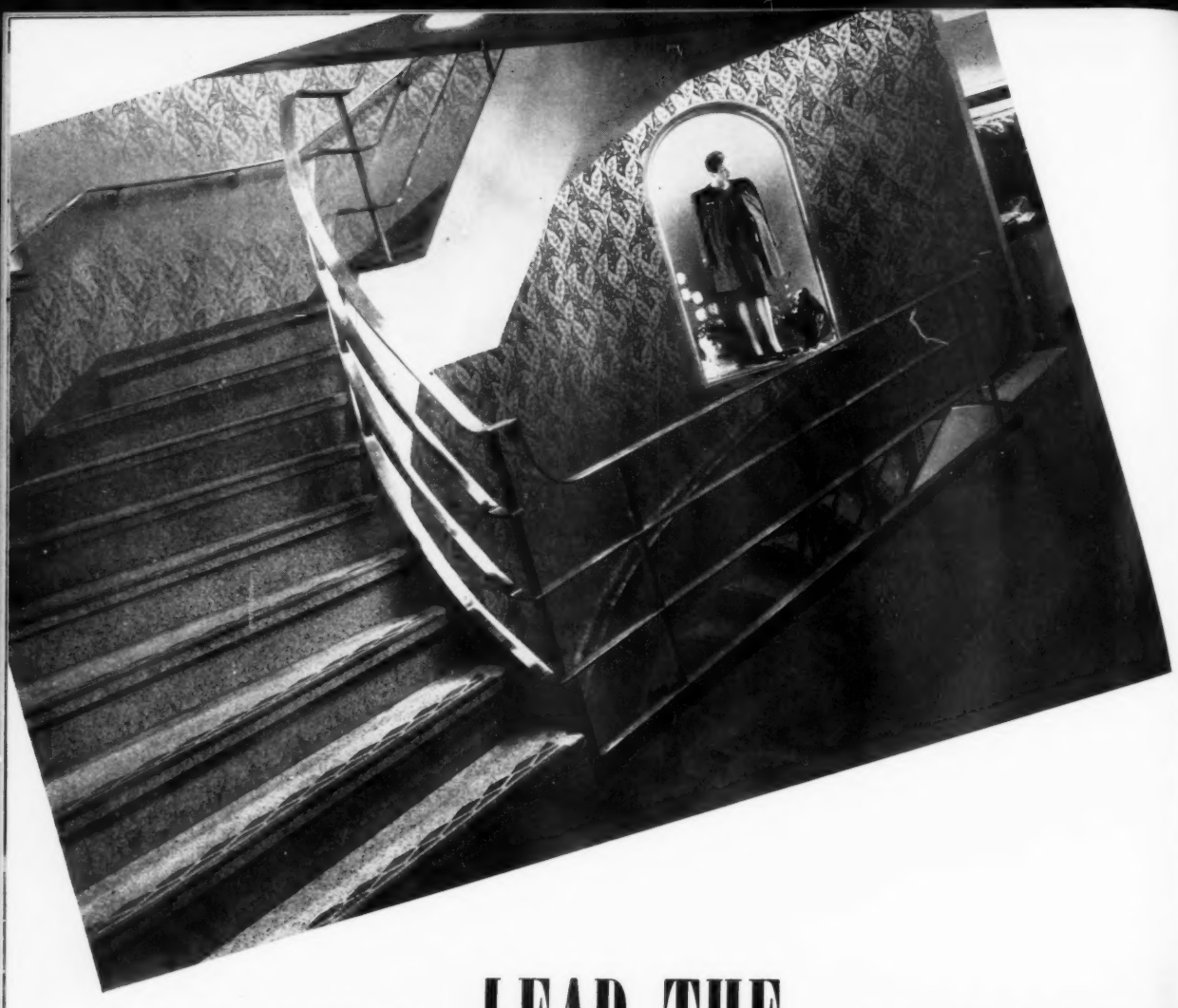
"That's a good business getting policy, too—at any rate it certainly has been for us. Sure, it costs money to make a lot of changes or alterations in order to satisfy a tough customer, but we charge those things off to advertising for we have found this is, in itself, an excellent kind of advertising.

"In a city of this size any contractor's mass business is going to come from what the customer has heard from his friends, neighbors and business associates about the kind of work our firm does.

"And you can believe it or not but

(*Continued on page 38*)

Wall space in the display room of Rogers Electrical Company, of Sapulpa, Okla., is used effectively to display various types of wall bracket lamps, mirror fixtures, etc. Shown in the picture are Bill Rogers, Jr., left, and G. R. Yooham, sales manager.



LEAD THE Customers WITH LIGHT

by H. M. White

Lighting Service Department Consolidated Gas Electric Light and Power Co. of Baltimore

SKILLFUL design of lighting for merchandising in larger stores includes utilization of light as an effective means of influencing traffic flow. The possibility of leading customers with light deep into buying area is demonstrated effectively in an installation just completed for Irvin's Department Store, in Highlandtown, on the outskirts of Baltimore.

The area is highly commercialized and appeals to industrial patrons employed in the area. The merchandising is very competitive, and light in this area becomes an important sales factor. The store is of a novel design executed by Kelly & Gruzen, New York architects.

The store consists of four sales floors, each being 114 ft. long and 26 ft. wide with a 14 ft. ceiling. Three types of lighting sources are employed in the new srtucture—cold cathode. hot cathode, and incandescent. The purpose throughout has been to show merchandise with maximum effectiveness and to provide "seeing" conditions for shoppers that will arouse interest and invite further inspection.

Starting at the sidewalk, light as a motivating element is run in continuous lines on the underside of the marquee, between the show windows, through the doors and down the center of the first floor. The continuous lines of light are made up of Westinghouse CL40 units spaced 18 inches between rows.

The two show windows on either side of the vestibule are 35 ft. long, 7 ft. wide and 8 ft. high. One hundred fifty watt PAR38 lamps in Swivelier sockets are spaced on 12 inch centers at the glass line, together with 2-light 40-watt fluorescent strip run continuous through the length of the show window ceiling spaced 4 ft. between rows. Plywood baffles are used between each of the reflector lamps, and the fluorescent lamps shield them from view of persons in the vestibule or sidewalk. In effect, the entire first floor is a show window, the glass doors maintaining the continuity of the display areas that flank the entranceway.

Within the building a long and rather narrow floor space has been

treated in a manner that serves to convey a feeling of width. This impression is enhanced by a hung ceiling suspended 18 inches below the ceiling proper and comprising about the middle third of the ceiling area toward the rear of the store, but expanding wider with a graceful curve to the forward portion of the store, and finally projecting through the glass doors over the show windows, and out over the sidewalk to form the marquee.

As we pass through the glass doors to the interior of the first floor the impelling overhead lines of light still guide us deep into the store to the points of sale. First, there are the jewelry counters; and recessed in the hung ceiling above are 500-watt Pittsburgh E-530-8 units spaced on 8 ft. centers to give 75 to 80 foot-candles.

Then, we come to the many novelty counters, and here the light lines terminate; the hung ceiling becomes narrow and straight. Actually, it is 7 ft. wide and it serves as a cover-all for the utilities, such as air conditioning ducts, sprinkler piping, wiring, cold cathode transformers, and lighting equipment, all concealed above the ceiling, but easy of access for maintenance.

Recessed in this portion of the hung ceiling are two rows of 300-watt lamps in Pittsburgh No. 54-2 reflectors with asymmetric louvers spaced on 6 ft. centers. These are show window reflectors directing light across the store giving a high vertical component of light on the merchandise. The intensity is 50 foot-candles, tapering to 30 foot-candles in the aisle.

The spotlighting is relieved by two cold cathode tubes set in coves on each side of the hung ceiling directing light to the main ceiling. These are warm white 15 mm. tubes fabricated in 6 ft. lengths for ease of handling. The electrodes are staggered so as to avoid scalloped shadows on the ceiling. Twelve thousand volt, 60 ma. high power factor transformers are spaced every 24 ft. in the cove to energize the double tube in each cove. The tubing is run away from either side of the transformer with a common tube return, so there is little or no high tension cable required. Cold cathode tubing is specified in the coves primarily for the reason that it could be bent to the curved contour of the hung ceiling in the forward portion of the store and vestibule.

The spot or accent lighting is further relieved by 40 watt fluorescent strip run continuous back of a shield which constitutes part of the wall case construction, running the entire length of each side wall. This creates a veil of light on the wall cases together with spill light up the side wall and to the ceiling. Cold cathode of the tailor-made type is not used here primarily because of the high voltage being at such an elevation that persons may come in contact with it. This is done at the sacrifice of scalloped shadows running up the side walls due to the width of sockets.

Going to the second floor, we find in general the same treatment in lighting, in that the hung ceiling runs the full length of the store and is only curved at the ends. The main ceiling is 2 ft. lower than on the first floor. The cold cathode tubing, the recessed louvered show window reflectors, and the hot cathode strip are carried out in the same manner on all four floors.

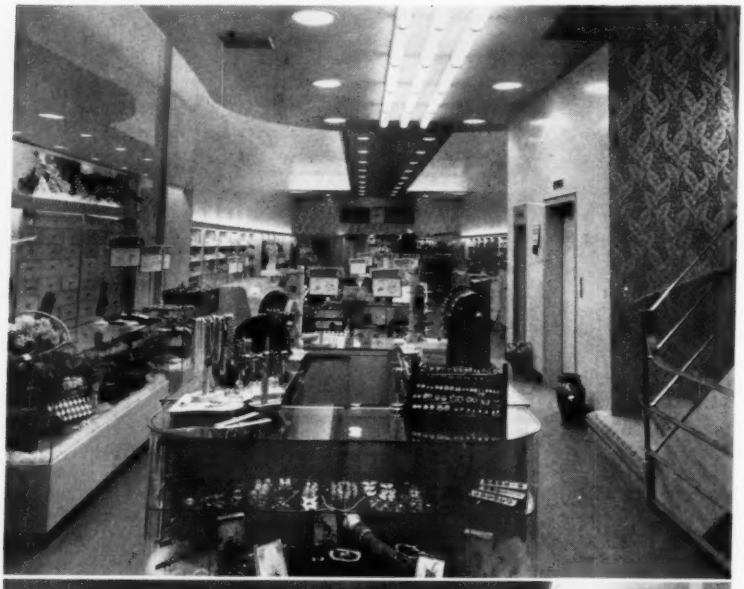
The main ceilings are of plaster painted flat white, the hung ceilings are white acoustical tile, the walls are plaster painted in pastels of blue, peach, and green for each floor, respectively. The average brightness of the main ceiling is in the order of 50 foot-lamberts, and the hung ceiling is 5 foot-lamberts. The brightness of the louver is 550 foot-lamberts and the walls are in the order of 35 foot-lamberts.

Provision is made for various types

This attractive Baltimore store includes cold cathode, hot cathode, and incandescent lamps in its carefully designed lighting installation. The design included utilizaton of light as a means of influencing traffic flow.

of local lighting depending on the specific merchandising on each floor. For instance, in the ladies wear, there are four three-way mirrors. Two vertical fluorescent strips behind sand blasted glass panels are used for each set of mirrors. Special fluorescent light strip is used for hung draperies and floor coverings. Care was taken to provide outlets for all convenience, such as cash registers, clocks, call chimes, time clocks, night lights, etc.

Essentially, four floors of this store are lighted with indirect fluorescent, direct incandescent. The high vertical component of direct incandescent lends itself admirably to the type of merchandising in this store since much of the apparel is set upright.



The false ceiling of acoustical tile serves as a cover-all for the utilities such as air conditioning, sprinkler pipes, wiring, cold cathode transformers, etc. The show window type of incandescent lamp reflectors build up a high component of vertical lighting at the sides which is particularly desirable in such a store.

Only the Best Is Good Enough

(*Continued from page 35*)

when we go to the trouble of handling such a tough customer that person will invariably turn out to be the best booster we have. There's many a time we know the customer had no justifiable base for his dissatisfaction, but we made the changes anyway without cost to him . . . and we have yet to make such a change when the person involved didn't turn out to be a very good booster of ours who sent us more than enough new business to wipe out the small additional expense of making such changes."

Rogers pointed out that another factor accounting for the good business enjoyed by his firm has been their refusal to hire "sloppy, inefficient men."

"There have been times when a contractor couldn't find any other kind of workman," he hastened to add, "but we let the jobs wait or lost them rather than put on that type of worker—they do too much damage, run costs up too high, and get a bad reputation for your firm and the work it does.

"We've known other contractors in this area who took on such workmen who did the jobs at hand, but today the people for whom those contractors had their men working are some of our best customers. Those electrical contractors have ruined their reputations, and their story that better men are now available falls on deaf ears.

"People are primarily interested in performance and not promises these days. An electrical contractor has to deliver the goods or get out of the business—and we feel that applies in a big city today just as it does in our small town."

Rogers carries a $60,000 inventory all of the time and he believes that this has been one of the firm's big assets. He points out that many small-town contractors have been reluctant to put anything into inventory and have suffered from this attitude.

"The day may come when a small-town contractor can send his truck to the nearest big town and have what he needs back on the job before nightfall," he commented, "but from here that time looks a long way off. Big jobs occur in small towns just as well as in big ones and unless the local contractor has the equipment and materials to handle that job when it comes along, this very profitable business is going out of his city to the big-town contractor who does have the inventory.

"We study every industry in our area all of the time and try to anticipate any need they may have, and then we try to keep an inventory of materials, equipment, etc., suited to those possible needs. It's a policy that has paid us off again and again, and it is always our best insurance that the big jobs won't get away from us to the big-city contractors."

LEARN YOUR CUSTOMERS' PROBLEMS

by

L. H. Houck

THE WISE electrical contractor is one who is now observing the trend of building and business expansion. He is studying the problems of industry and business. As a result, he often knows in advance, or may even suggest to customers, remedies for their business problems—remedies but remotely connected with a wiring contract. This is service-selling—the highest type of business effort.

One progressive electrical contractor who keeps in close touch with the trends in business and industry is G. T. Ely, owner of the Ely Electric Service and Supply, in Middlesboro, Kentucky.

In the moving picture theater business there is a definite trend over the country to open candy and popcorn stores in the front of the theater buildings. Some have space at one side they can convert to a small compact store, easily reached by theater patrons as they come and go.

These small stores are always modern. They most often sparkle with chromium, fluorescent, and neon. They require wiring for lights, signs, fountain, refrigeration, and fountain and restaurant equipment.

Mr. Ely has wired two such adjuncts in his town of Middlesboro and one in another Kentucky town. In Middlesboro, he was given the contract for wiring the city's third theater, a new one, and part of a $250,000 building, containing a restaurant and bus terminal. This turned out to be better than a $3,500 wiring job—he got the whole building.

One of the extra dividends on such wiring jobs as theater candy stores, Mr. Ely explained, is that usually the wiring system is already overloaded when the expansion is planned. In the case of one theater, where he has just finished wiring a candy store, he split the service. He left the old wiring in and put in new wiring to carry half the load, giving each of the circuits half the load to carry. One projection machine is on one circuit and the second machine is on another.

G. T. Ely, electrical contractor of Middlesboro, Kentucky, checks the blueprints on one of his largest jobs to date; that of wiring Middlesboro's first radio station. His job includes all wiring to the base of the tower, which takes in lighting, power panels and radio panels.

Half the house lights and half the marquee lights are on one circuit and the other half are on the new circuit.

A job like that is a credit to the planning of the electrical contractor because it performs a definite service in addition to doing an adequate job. The theater owner got his load reduced on his old wiring, he got his expansion connected with his new wiring, and without any additional cost he got a hookup that will allow him to keep half his lights burning when a circuit breaker trips. Only a catastrophe that would blow the main panel fuse would completely darken his show.

Mr. Ely, who does most of his own designing and engineering, always points out the advantage of having dual circuits to a business serving the public.

While wiring adequacy in Middlesboro is virtually unknown from a customer standpoint, Ely has found that the average buyer of wiring wants a good job once it has been explained.

An average 5-room house in the Middlesboro area could, possibly, be wired on a cut price basis for $100, according to Mr. Ely. Most people who are building houses are aware of this. What they do not know, Mr. Ely said, is the difference between a $100 wiring job and a $300 job.

Mr. Ely usually figures around

$300 for the average 5-room house. He is always glad to explain the difference to the customer. It might cost $500 to get the kinks out of a $100 job in the first three years. It might even burn the house down. The wiring will probably be improperly planned and dangerously installed. It might invalidate the insurance. It will probably cause the owner much worry and a lot of lost time from fuse blowing. It will be done with cheaper materials, smaller wire, and will use many short cuts to save labor.

These are some of the things that Ely points out to the prospect, but the clincher is this: "If it were possible to wire your house properly, using proper and adequate materials, for $100, I could do it and make more profit than average because our men are experienced workers. They are fast and efficient. If our price runs $300, it is because we have used the proper sizes of wire for the current to be used, high grade switches and other materials. We only charge for what we do and the material we put in."

Many people do not yet realize what the wiring does and why different sizes of wire must be used and why only so many branch circuits may be taken from a main. As an example, Ely said it took him three weeks to convince an old couple that they needed new wiring.

They owned a house in which the wiring was 12 years old. It had been put in for lights only. The old man became intrigued with the efficiency of electric heaters as shown to him in an appliance store. He thought of the chill winds in the fall and the rheumatism in his joints, and planked down the cash for three heaters. He bought a 1500-watt, a 1200-watt and a 1000-watt.

He took them home. That night he plugged one in and blew out all the fuses. The next day he called Ely. He fused up the circuit and after being shown the heaters explained to the old gentleman that his wiring wouldn't carry even one of them, much less all three.

The old gentleman was not to be so easily taken in. He had electric lights and electric wiring and, "By Golly, he was going to burn them heaters."

There's not much an electrical contractor can do in a case like that.

The old man said the trouble was with the fuses. He raised the anti on fuses during the next three weeks. He went as far as he could go when a friendly neighbor initiated him into the fraternity of the penny-in-the-fuse. That turned the trick. He hooked up his heaters and burned up the power company's electric meter and almost set the house on fire. E'y got the wiring job and the heaters are a good thing after all.

As Ely pointed out this is an extreme case, although it actually happened, but it also serves to remind the progressive electrical contractor that all the old buildings in town are probably inadequately wired. They are in the market for new wiring jobs, dual circuits, and new lights—but they may not realize it until the contractor reminds them-

As a matter of fact during the two and a half years Mr. Ely has been operating his contracting business in Middlesboro, he has sold dozens of rewiring jobs on the knowledge that wiring fifteen, twenty or thirty years old is apt to be overloaded and a source of trouble.

An interesting sidelight on such jobs is that in almost every case Ely has been able to sell and install an electric water heater. All the theater candy stores he has wired have also bought a hot water heater.

Every restaurant that buys a three-wire job for fry kettles and waffle bakers, are in the market for a hot water heater job but often do not realize it until it is suggested by Mr. Ely.

Electric loads on existing wiring are being increased at a much faster rate than most contractors realize, Mr. Ely said. One Sunday in Middlesboro a main burned in two in a clothing store when no one was about. The wiring was at least thirty years old. The new replacement wiring job was adequate, had plenty of convenient outlets and was three-wire for use of 220-volt appliances. Other owners of stores with ancient wiring were thus warned and there was a rush of repair jobs, inspection, and electric load shifting to avoid interruptions and possible fires.

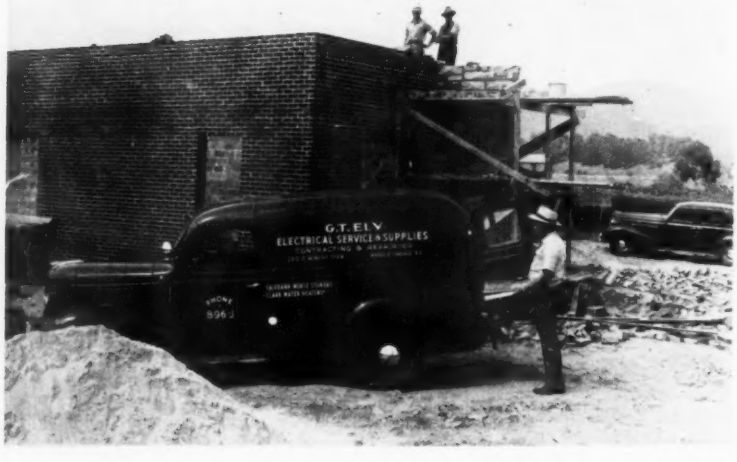
While Mr. Ely does not deal in a full line of appliances he does sell electric water heaters, and he tries to sell his wiring customer the lighting fixtures needed.

With lighting fixtures, he discusses the situation with the customer and points out to him the value of buying a fixture with good appearance and one which at the same time gives adequate lighting. He tells the customer that it is a waste of money to pick out any kind of a fixture and stick it up haphazardly. If they like, he will make a full plan of the lighting ideal for the structure, taking into consideration the use to which the light will be put in each room.

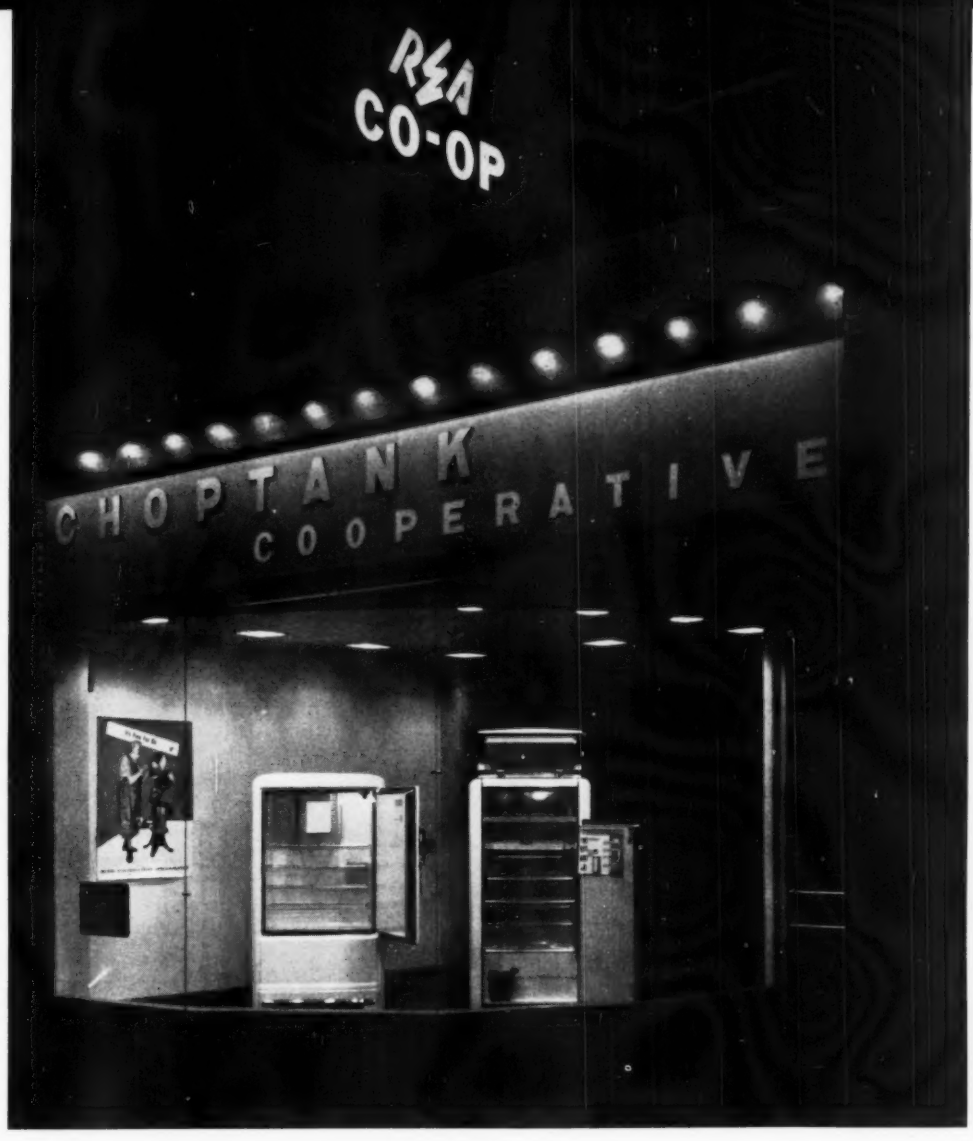
This often leads to contracts of surprising scope, Mr. Ely said.

He has just finished a quality wiring job in a $35,000 residence. All wall switches were mercury switches. Ivory plates were used throughout. In basement and in kitchen the lighting fixtures were fluorescent circle lamps. The house had separate circuits for radio sets, wired to the exact spot where the radios were to be located. The house was equipped with a telephone wiring system so that phones could be plugged into wall jacks in nearly all rooms. There were

(*Continued on page 91*)



A firm believer in close observation of building trends, G. T. Ely feels that the wide awake contractor can often predict the future needs of his customers.



Merchandising through Co-ops

How the REA is lending a hand to the appliance dealer in helping him to solve his merchandising problems

One morning a few weeks ago a member of the REA co-op at Wauchula, Florida, dropped into the office to pay his bill. Attracted by an electric water pump on display in the lobby, he asked a few questions about it. Next day the Wauchula appliance dealer who had placed the pump there moved it out.

"Say," he told Ivon Tilyou, the co-op manager, "that's what I call good business. That pump was on display here only two days when one of your members bought it. I've got another pump at the store that I'd like to put in its place."

And the happy dealer lost no time in refilling the vacant display space in the co-op lobby.

Such dealer assistance on the part of co-ops is given general encouragement by the Rural Electrification Administration. Dealers everywhere should find it worthwhile to see the REA system manager in their area and inquire about this phase of co-op service to the industry.

For it is the policy of REA to advise its borrowers to assist local dealers in carrying on merchandising programs, rather than engage in merchandising themselves. As a result, most REA borrowers sell little if any equipment. Instead, they concentrate on the primary job of supplying power. *(Continued on page 91)*

Revolution in the South!

Rapid progress in rural electrification changes way of life in the rural South

By Allyn Walters*

WHILE INDUSTRY has been scratching its head, figuratively, to find ways and means of producing to meet its backlog of demand, an electrical revolution has opened new markets in the South for electrical appliance and equipment dealers.

Engrossed in diversification of its industry and agriculture, the land of cotton is putting electricity to work.

Since 1934, rural electrification has jumped from 3½ per cent of the farms electrified in 17 southern states to more than 52 per cent at the end of 1947. Not only that, but the average use of electricity on these farms has nearly doubled in the past six years.

The increase in consumption of electricity is evidence of the sweeping change that is taking place. The accompanying table, giving average farm use on REA-financed power lines, shows that even though the average for these 17 states is below the national rate, it is increasing steadily. Alabama, Georgia, Kansas and Maryland have either doubled or more than doubled their use of electricity on REA-financed rural lines.

Of the total loans approved by REA for rural electrification, more than half of the money has been made available to borrowers in these 17 states.

As of March 31, 1948, REA has approved loans in the South amounting to $668,629,914. This will finance the construction of a half-million miles of line and other electrical facilities, and provide central station electric service to 1 2/3 million farms and other rural establishments.

Already 340,000 miles of lines have been energized and are serving 1¼ million consumers. The figures for cost of line construction have a special significance for the electrical trade, because past experience has shown that for every dollar invested in a power line, the farmer spends $4.50 for wiring, plumbing and appliances.

Although some sections of the rural South got off to a later start on rural electrification than other regions, this should not deter the appliance trade from preparing to meet a demand that already is building up and which, in the next few years, will reach flood tide. Line construction reached a new peak last year and has been climbing this spring.

The Bureau of Agricultural Economics recently conducted a survey of electrical equipment of farms. On the basis of 8,400 replies received from farmers in all sections of the country, BAE reported that southern farmers generally have fewer kinds and numbers of electrical appliances than farmers in any other region. Some of this is due, of course, to the fact that relatively fewer southern farmers as yet

*Mr. Walters is head of the Press and Radio Services Section, Rural Electrification Administration, Washington, D. C.

The data shown in the accompanying tabulation reports conditions only as found on REA-financed rural electric systems. They do not take into account the rural lines of the larger utility companies. The merchandising policies of the latter companies have enabled some of them to build up the monthly kilowatt-hour consumption of their rural customers to a much higher degree than the average shown in the tabulation. From the appliance dealer's point of view, however, the rural co-op electric customers represent a tremendous market waiting to be served—and many progressive dealers are capitalizing on the opportunity to serve this market.

Average Monthly KWH Consumption of Electricity of Consumers Served by REA-Financed Lines*

State	Dec. 1941	Dec. 1946	Dec. 1947
Alabama	41	77	88
Arkansas	43	58	59
Florida	54	74	81
Georgia	41	76	89
Kansas	60	101	120
Kentucky	52	78	90
Louisiana	46	53	53
Maryland	65	121	130
Mississippi	40	75	73
Missouri	54	75	89
North Carolina	37	57	63
Oklahoma	57	75	81
South Carolina	44	65	74
Tennessee	—	121	126
Texas	45	66	69
Virginia	54	78	89
West Virginia	50	78	85
U. S.	61	101	117

*It should be remembered that these figures are for all farm consumers. About half those included in the 1947 averages have been connected up since 1941 and have had little chance to build up their installations of appliances and equipment.

Estimated Percent of Farms Having Specified Electrical Equipment, July, 1947*

State	Refrigerator	Range	Washing Machine	Water System	Water Heater	Sewing Machine	Vacuum Cleaner	Central Station Service
Alabama	27	8	15	16	5	2	4	48.0
Arkansas	17	3	21	9	3	4	5	42.2
Florida	31	14	23	30	13	7	13	58.8
Georgia	26	6	16	22	10	6	5	53.8
Kansas	26	6	35	17	4	3	20	41.7
Kentucky	22	5	26	5	4	2	9	43.8
Louisiana	16	2	12	17	4	3	3	45.8
Md. and Del.	63	13	65	43	9	9	36	79.1
Mississippi	16	2	7	10	2	2	2	32.9
Missouri	33	8	37	22	2	7	23	49.2
North Carolina	27	4	23	18	5	2	6	54.8
Oklahoma	24	1	31	15	3	5	18	47.7
South Carolina	28	7	12	17	3	3	6	52.2
Tennessee	24	11	24	10	6	3	8	40.4
Texas	25	2	25	16	2	6	9	55.8
Virginia	32	3	33	19	3	3	10	53.9
West Virginia	23	4	40	9	7	3	21	50.7
U. S.	38	12	43	27	10	7	25	61.0

*Data are based on returns from questionnaires mailed to a cross-section (random) sample of farmers by Bureau of Agricultural Economics, U. S. Department of Agriculture. Appliances on only those farms having central station electric service are included. The sampling standard error of the State estimates varies, the maximum being about 5 percentage points.

have central station electrical service.

What kind of equipment and appliances do the South's rural people need? The answer is this—nearly everything that is used by farmers and their families in other regions in addition to equipment that may be required because of geographic and agricultural conditions peculiar to the South.

On the basis of 743 replies to questionnaires mailed to 2,340 members, the Taylor Electric Co-op, at Merkel, Texas, found refrigeration units in keenest demand, 368 members reporting units installed and 162 to be purchased. Washing machines were second with 211 units installed and 83 to be purchased; water pumps ranked third, 165 units installed, 96 to be purchased. Ranges, poultry lighting equipment, brooders, welders, cream separators, milking machines and milk coolers were among other appliances in demand.

Howell-Oregon Electric Co-op, West Plains, Missouri, received 1,213 replies to queries sent to 1,656 members. The replies showed a strong demand for refrigerators, ranges, feed grinders milking machines, home freezers, water heaters, washing machines, and miscellaneous equipment.

Of those replying to the questionnaire, 375 had refrigerators installed, and 521 planned to buy; 766 washing machines were installed, 328 were to be purchased; 148 had water pumps, and 314 planned to buy them; 7 had feed grinders, and 84 were planning to buy them; there was one hay-curing system, and 11 farmers planned to install them. Thirty-six had water heaters, 161 were to be purchased. The demand for dairy water heaters, cream separators, electric welders, and motors was reported in about the same proportion.

Twenty-eight hundred replies to questionnaires sent to 5,165 members of Choptank Electric Co-op, Denton, Maryland, reported 1,393 refrigeration units installed, 478 to be purchased; 2,383 radios installed, 148 to be bought; 1,801 washing machines in use, 249 to be purchased; 1,279 water pumps in operation, 227 to be installed. Ranges, water heaters, dairy and farm shop equipment, motors, welders, feed grinders and other items also were reported in demand.

Sales Promotion Needed

Electrification in the South, as elsewhere, is more than a matter of providing miles of lines and other facilities. If farmers are to enjoy maximum benefits from electricity, they must be informed of the many ways they can use electricity effectively. More important they must have the equipment that will enable them to put electric energy to work, and service to keep equipment operating.

The present demand for electrical equipment far exceeds the output but it is inevitable that, once the backlog of orders is filled, there will again be a buyers' market. When that time arrives, manufacturers and dealers will find the rural South one of their most promising fields.

Planning Ahead For Profit

(*Continued from page 33*)

cost more money but they don't lose your money from mistakes, nor ruin your reputation with bad jobs. While we realize that learners may have a place in the business, we are also sure that it is not in our organization. We are so tightly organized that we cannot use a man who is not highly trained and fully qualified, as well as honest, industrious and adept."

Industrial Electric Service is three years old and in that short space of time has handled many large jobs in this industrial area.

The organization is departmentized, too. While specializing in electric wiring for new construction, it has a motor shop, a sales department for appliances, and a trouble shooting department.

Another thing that Jones does on every job is to erect one of his large signs which states who is doing the electric work.

"We want everybody to know what jobs we are working on," Jones said. "If they are interested in letting a wiring contract, they might want to go and watch our men and see exactly what kind of work we do. We've gotten a lot of jobs just that way."

Business Prospects for 1949:

Good, but -- intensive selling and creative merchandising will be needed to maintain sales volumes at 1948 level

by Thornton B. Moore

THE ELECTRICAL appliance industry, during the 6-year period since production of appliances ceased in 1942, has perhaps undergone greater change than any other "established" industry. During this period the market for the industry's product has likewise undergone considerable change. It is proposed in this study to analyze the more important of these changes and to attempt to anticipate some of the possibilities for the future.

Growth of The Industry

The growth of the electrical appliance manufacturing industry in the postwar period has been tremendous. This growth has taken place in five ways:

1. Prewar electrical appliance manufacturers have increased their production capacity for products which they manufactured before the war.

2. Prewar electrical appliance manufacturers have broadened their lines and are producing today some items that they did not manufacture prior to the war.

3. Established manufacturers not previously producing electrical appliances—such as General Mills, International Harvester, Pressed Steel Car, Yale and Towne, and many others—have begun production of one or more appliances since the war.

4. Small manufacturing establishments born during the war years have gone into the manufacture of electrical appliances (this applies chiefly to heating and table appliances where no large investment in plant is required).

5. A number of new electrical appliances introduced just prior to the war now appear to be coming into their own and are being produced in increasing numbers by a constantly increasing number of manufacturers.

Chart No. 1 shows for the approximately two dozen electrical appliances under consideration the number of manufacturers producing each appliance in 1941 and the number of manufacturers producing in 1947. It also shows the number of 1941 manufacturers of a product which have not resumed production of that product since the war, and the number of manufacturers now producing the product for the first time. It will be noted from totals shown in the supporting table (Table No. 1) that if there had been a display in 1941 of all makes of the appliances listed in the chart, 680 items would have been included. In 1947 such a display would have included 981 items. It is of interest that 238 of the items that would have been displayed in 1941 are now "orphans." Also of interest is the fact that of the 981 appliances on display in 1947, 539 were produced by companies not manufacturing the item prior to the war. Many of these items are presently being produced by established manufacturers that did not previously manufacture any electrical appliances.

Leading all other items in postwar growth is the home and farm freezer which was produced by only 3 manufacturers in 1941, but, today, is made by 92 companies. Other items that have had considerable growth in number of manufacturers are the automatic washing machine, dishwasher, automatic toaster, garbage disposer, clothes dryer, and electric bed coverings.

It appears that the electrical appliance manufacturing industry has over-expanded, certainly in some lines, and that the months ahead will find fading out of the picture the less efficient producers and those new manufacturers who are unable to develop some degree of public acceptance for their product. The "name" brands undoubtedly will have the best chance of survival, although it wouldn't be surprising if some of the long established firms that are venturing into the electrical appliance field for the first time find the going rough and decide to abandon their newly-adopted side-line. Without question, the months immediately ahead will be a period of adjustment and jockeying for position which will determine what brands will survive and will set the pattern for the future of the industry.

Wholesale Distribution

Approximately two-thirds of the output of electrical appliance manufacturers follows the normal distribution channels of manufacturer to wholesaler to retailer to consumer, the balance going direct to retailer, consumer, or industrial user.

According to the U. S. Census of Business, there were 3,071 establishments engaged in the electrical wholesaling business in 1939, exclusive of manufacturers' sales branches, establishments selling on an agency basis, and wholesalers whose major operations were not in the electrical goods field. There can be little doubt that the number of establishments wholesaling electrical appliances has increased greatly since that time, in view of the expansion of the market and the large increase in number of electrical appliance manufacturers, of which each new one has had to establish a distribution set-up of some sort.

Current statistics of the electrical wholesaling business are published monthly by the Bureau of the Census and are available without cost. This release titled "Trends in the Electrical Goods Trade" contains sales and inventory data by geographic divisions.

Mr. Moore is associated with the Office of Domestic Commerce, U. S. Department of Commerce, Washington, D. C.

Table No. 1

Number of Electrical Appliance Manufacturers Prewar and Postwar

Item	1941 mfrs.	1941 mfrs. that have ceased production	New postwar mfrs.	1947 mfrs.
Refrigerators	25	12	14	27
Freezers, home and farm	3	1	90	92
Ranges	32	11	11	32
Water heaters (Storage)	38	14	36	60
Dishwashers	6	3	7	10
Disposers, garbage	3	0	8	11
Vacuum cleaners (Floor type)	22	5	2	19
Vacuum cleaners (Cylinder type)	15	2	7	20
Washing machines (Auto)	3	0	8	11
Washing machines (Non-auto)	41	12	11	40
Ironing machines	26	6	11	31
Clothes dryers	9	3	5	11
Irons (Auto & nonauto)	36	10	39	65
Food mixers	17	4	7	20
Toasters (Auto & non-auto)	27	8	22	41
Waffle irons	24	9	11	26
Sandwich toasters	19	8	7	18
Coffee makers, glass	19	8	12	23
Percolators	14	6	6	14
Roasters	8	1	4	11
Hot plates, grills	39	16	41	64
Fans (Attic)	37	13	17	41
Fans (Air circulators)	24	8	23	39
Fans (Desk, bracket, pedestal)	40	14	12	38
Fans (Ventilating & exhaust)	63	28	38	73
Space heaters	52	20	59	91
Heating pads	17	7	8	18
Bed coverings	2	0	7	9
Clocks	19	9	16	26
Total:	680	238	539	981

Source: McGraw-Hill Publishing Co. Classified Directory of Appliance Manufacturers.

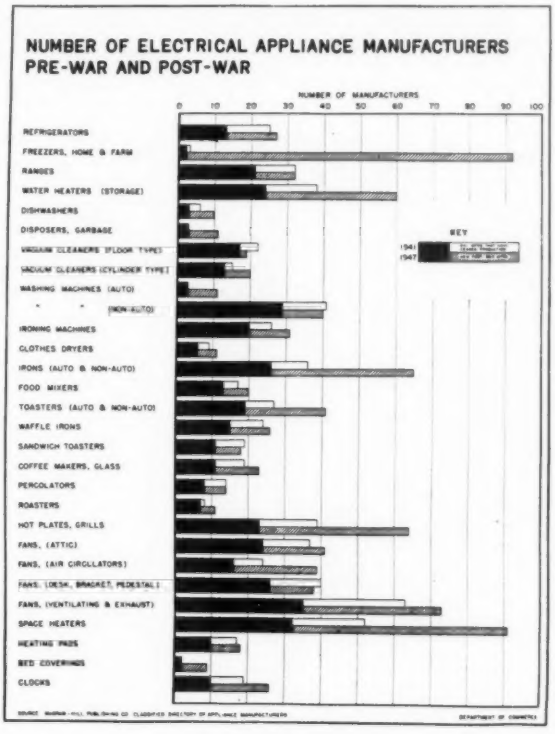


Chart No. 1

Table No. 2

"Household Appliance-Radio Stores" Versus "All Retail Stores"

Year	All retail stores (Thousands)	Household Appliances-Radio Stores (In Thousands) No. of stores	New businesses	Businesses discontinued
1939	1,601.4	15.0	(a)	(a)
1940	1,584.7	14.8	(a)	(a)
1941	1,620.8	14.8	(a)	(a)
1942	1,480.7	12.7	(a)	(a)
1943	1,329.9	10.3	(a)	(a)
1944	1,354.4	11.1	2.1	.4
1945	1,493.5	15.5	4.2	.5
1946	1,694.3	21.7	7.2	1.0
1947	1,762.1	23.4	3.5	1.7
1948 (1st Quarter)	1,769.7(b)	23.7(b)	.8(b)	.6(b)

Note 1: In the above tabulation, each chain group is counted as one regardless of the number of operating stores.

Note 2: For period 1939-1944, number of stores shown is as of Sept. 30; for 1945-1947, number is as of Dec. 31.

(a) Figures not available.

(b) Preliminary estimate.

Source: Office of Business Economics, Department of Commerce.

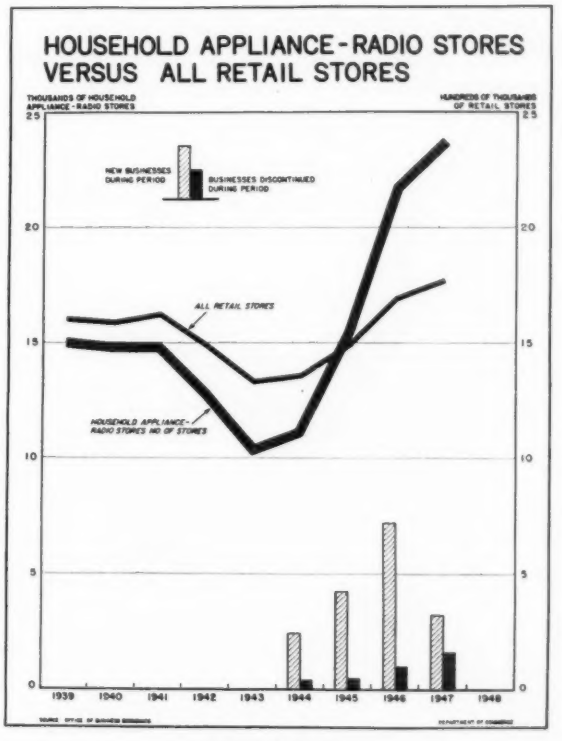


Chart No. 2

Table No. 3
Electrical Appliance Sales, 1929 — 1947

Year	Sales*
1929	504 188
1930	457 513
1931	420 350
1932	252 615
1933	319 294
1934	415 022
1935	491 717
1936	618 763
1937	730 197
1938	475 696
1939	635 242
1940	758 433
1941	1 045 874
1942	(a)
1943	(a)
1944	(a)
1945	(a)
1946	1 400 562
1947	2 730 767

*Retail value in thousands of dollars
(a) Not available.

The consensus among the manufacturers and the trade is that there are too many dealers in the electrical appliance business today, many of whom are new, with little knowledge of selling methods, and whose experience thus far has consisted of apportioning merchandise to a waiting list.

As to a comparison of number of dealers today with the prewar period surveys by trade magazines indicate an increase of between 75 per cent and 90 per cent. A survey by "Electrical Dealer" revealed that in midsummer of 1947 there were approximately 76,000 dealers franchised to handle electric refrigerators and/or washing machines. Of this number, 37 per cent were "Household Appliance—Radio Stores."

The increase in number of retail outlets has varied considerably in different areas, depending on growth of the area and special local factors. For example, in the territory served by the West Penn Power Company (which does not merchandise electrical appliances) the prewar number of dealers was estimated at 780, the number in 1947 at 950 to 1,000—an increase of 25 per cent. While in the case of Southern California Edison Company (which has discontinued merchandising since the war) there are now some 1,900 electrical appliance retailers as against 600 in 1941—an increase of more than 200 per cent.

Chart No. 2 indicates the trend over recent years in number of electrical appliance retailers. This chart and the supporting table (Table No. 2) show for the period 1939-1947 the number of "Household Appliance—Radio Stores" in operation (this group constitutes possibly one-fourth to one-third of the retail outlets selling electrical appliances) and for comparison, the number of "All Retail Stores." Comparing 1947 with 1941, "Household Appliance — Radio Stores" show an increase of 58 per cent as against 9 per cent for "All Retail Stores." A further point of interest is the information as to number of "births" and "deaths" among the "Household Appliance — Radio" group of stores. It will be noted that number of failures thus far has not been disproportionately high.

It is very probably true that there are too many dealers today, and that the months ahead will see the elimination of many stores that are financially weak or poorly operated. Likewise, as indicated by a recent survey in the Chicago area by the National Electrical Retailers Association, many retailers handling electrical appliances as a side line are dropping out of the

(*Continued on page 89*)

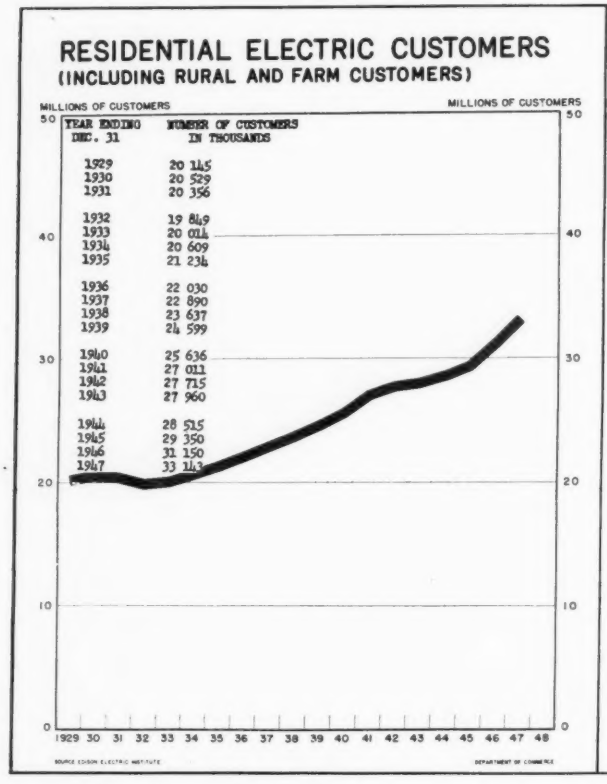


Chart No. 3

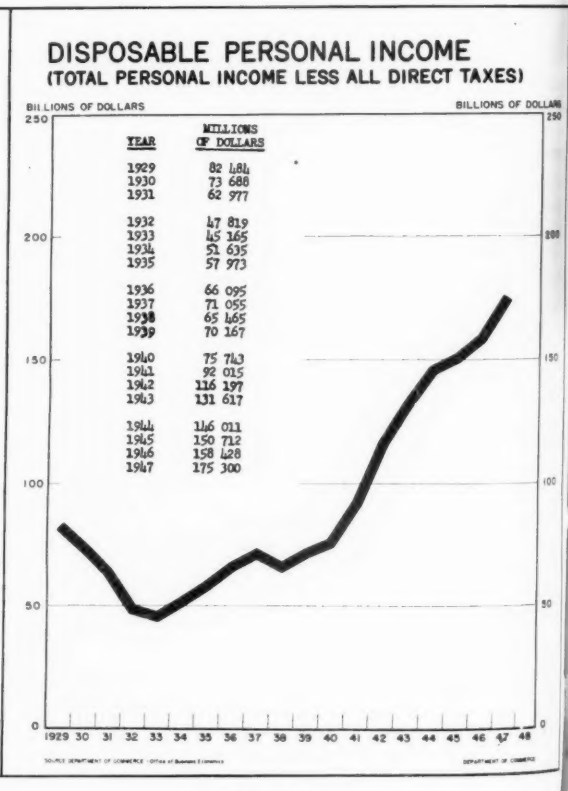
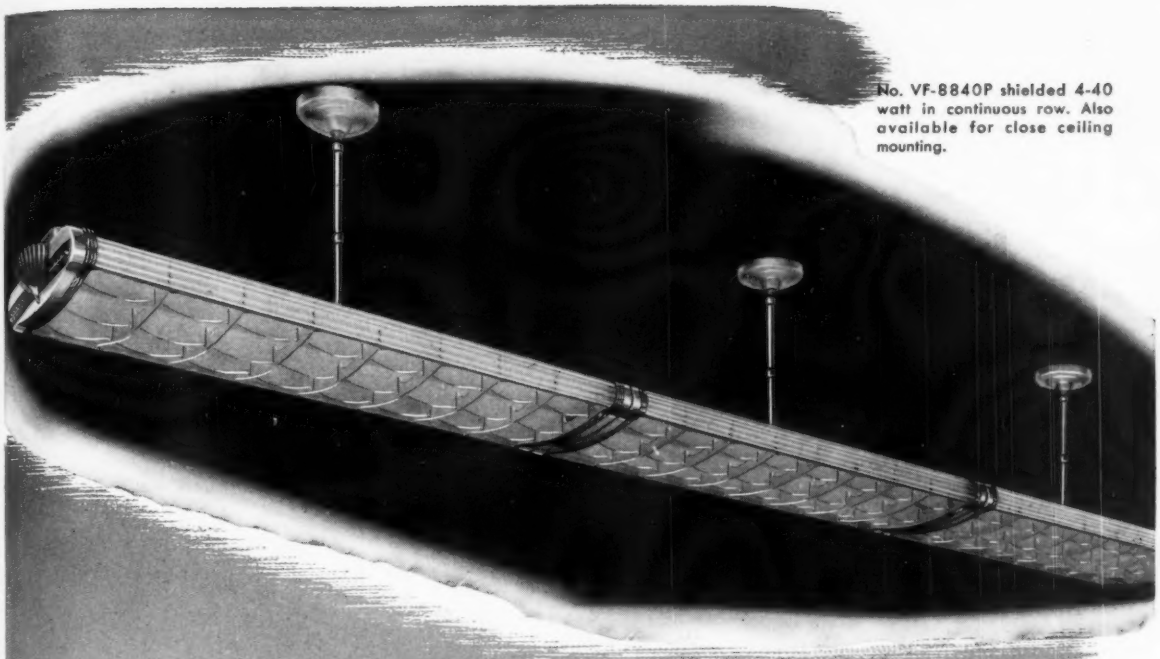


Chart No. 4



No. VF-8840P shielded 4-40 watt in continuous row. Also available for close ceiling mounting.

COMMERCIAL FLUORESCENT *by Virden*

for Continuous Lines of Light

you'll like this fluorescent unit by Virden. Smart style. Crisp, clean lines. Pleasing use of modern plastics. Outstanding performance. High efficiency. Easy to install. Priced for extra value . . . thanks to Virden skill in mass production. Supplied exclusively through your Virden jobber. Let his friendly service help you.

Smooth soft light well distributed for planned lighting . . . by Virden.

See how long lines of fluorescent by Virden can provide a ceiling of light.

VIRDEN VALUE

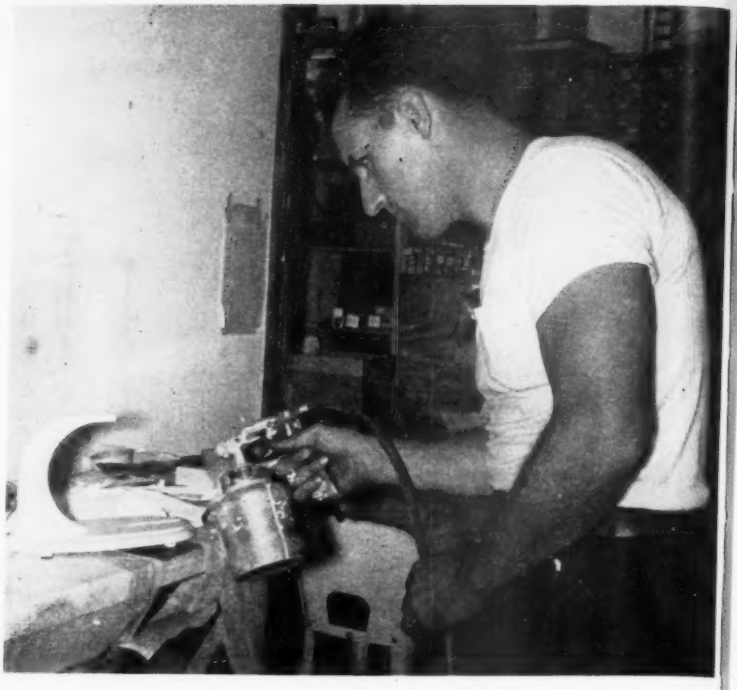
John C. Virden Company • Cleveland, Ohio

Member American Home Lighting Institute

Trade-ins *become* Profitable

by

Sophie W. Ellis



To avoid that second-hand look, all trade-ins repaired by the Bernheim Brothers are completely repainted before being resold to a new customer.

THE TRADE-IN PROBLEM that causes so much grief for some dealers is no problem for Bernheim Brothers, 208 Jackson Street, Monroe, La.

Trade-ins are extra profits for these four brothers who operate one of the busiest electrical appliance stores in town.

For the four partners, who are highly trained appliance repairmen, trade-ins mean the sale of new merchandise and a second profit in themselves that is an important addition to volume.

After trade-ins have passed through the repair shop, where they are equipped with new parts, repaired, adjusted, tested, and repainted to look like new, they become highly salable merchandise that is bought by eager customers in the used store operated in another part of town.

S. K. Bernheim says, "We keep the used store completely separate from our display store and repair shop because we feel that it pays to show only new merchandise in the downtown store.

"It is no disadvantage to have the repair shop at the main store, because we spotlight repairs, especially for electric shavers.

"Because we are the authorized repair station for electric shavers, our downtown repair shop brings us a lot of drop-in trade. People bring their shavers for repairs, and then often trade them in for new ones.

"Many men who buy the single head shaver at first soon find that they want a double head. We make a satisfactory trade, put the used shaver through the shop, and then offer it for sale in the second-hand store.

"We do such a lively volume in the sale of new shavers traded in for old ones that we like to promote shavers as traffic builders. People throughout our trade territory have learned about our repair and trade-in service, and they drive for many miles to let us serve them."

The four brothers, S. K., Bert, Norman and Manny, service everything electrical—appliances, tools, toys, and many other small articles. In their shop on the second floor over the display floor, two repairmen work on everything from refrigerators to mixers.

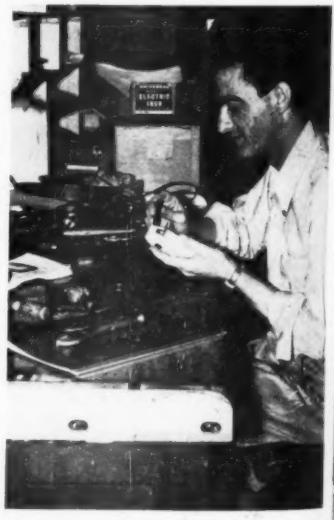
Many of the trade-ins are practically rebuilt. Rebuilding service is also given to customers. One of the services offered that customers especially appreciate is repainting of small appliances, refrigerators, and washing machines. A choice spray job is given which makes the article look almost new.

Two repair trucks are used for service on the job. While one is on call, the other is kept in front of the shop, ready for emergency service. Painted in brilliant colors, the trucks are signboards on wheels, advertising merchandise and repairs.

More calls are made for radio service than any other. The brothers try to induce the customer to bring portable radios in for repairs, but when this is not possible, they give pickup-and-delivery service.

The second-hand store is in excellent condition, with clean merchandise and good display. Everything

(Continued on page 88)

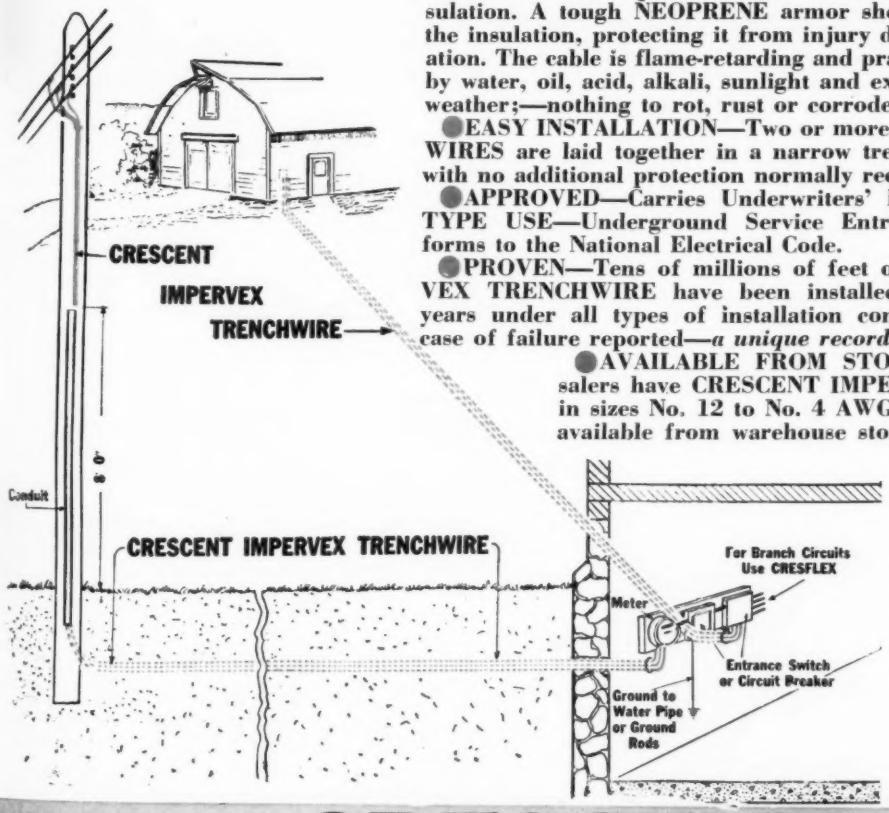


The repair and trade-in service on electric shavers is an excellent traffic builder in this well stocked Louisiana store.

CRESCENT
IMPERVEX TRENCHWIRE

For Lowest Cost Underground Use

CRESCENT IMPERVEX TRENCHWIRE provides the LOWEST COST, PERMANENT underground installation for services from power lines to meter, for connecting several buildings from the same service, as on FARMS, ESTATES and INSTITUTIONS and for STREET, AIRPORT, BALL PARK, DRIVE-IN THEATRES, and other outdoor lighting and power circuits. Also extensively used by INDUSTRY in ducts for underground power circuits.



●CONSTRUCTION—The single copper conductor is insulated with IMPERVEX special moisture and heat-resisting rubber insulation. A tough NEOPRENE armor sheath is vulcanized over the insulation, protecting it from injury during and after installation. The cable is flame-retarding and practically UNAFFECTED by water, oil, acid, alkali, sunlight and exposure to the earth or weather;—nothing to rot, rust or corrode.

●EASY INSTALLATION—Two or more IMPERVEX TRENCHWIRES are laid together in a narrow trench to form the cable with no additional protection normally required.

●APPROVED—Carries Underwriters' Laboratories' Label as TYPE USE—Underground Service Entrance Cable, and conforms to the National Electrical Code.

●PROVEN—Tens of millions of feet of CRESCENT IMPERVEX TRENCHWIRE have been installed over the last seven years under all types of installation conditions, with not one case of failure reported—*a unique record of dependability!*

●AVAILABLE FROM STOCK—Electrical wholesalers have CRESCENT IMPERVEX TRENCHWIRE in sizes No. 12 to No. 4 AWG in stock. Larger sizes available from warehouse stocks or the factory.

BULLETIN No. 451 giving technical information on selection of proper size of conductor, etc. will be furnished on request.

CRESCENT
WIRE and CABLE
CRESCENT INSULATED WIRE & CABLE CO.
TRENTON, N. J.

ATLANTA, GA., Edgar E. Dawes, 401-402 Rhodes Building
NEW ORLEANS, LA., Paul Hogan, Jr., 305 Levert Building
RICHMOND, VA., Robert W. Fishburne, 112-114 Exchange Bldg.
DALLAS, TEXAS, M. C. Huie Company, 707 Thomas Building

turn returns into GOOD WILL

by J. E. Bedford

Two GIRLS came into the appliance store and demanded to see the manager. They were not exactly mad, but had a determined, mistreated look in their eyes. After waiting a few minutes the manager approached them with a cheerful greeting.

The older girl started talking in a rapid determined manner. "The radio phonograph we bought last week doesn't work as well as we had hoped it would. The reject button is difficult to press and it is dropping more than one record at a time. When we started to bring it back we pulled the plug out from the wall and didn't know about the special lock plug so now the cord is disconnected from the plug. We want to return the radio."

"I'm sorry this happened to your machine. Let me send out for it and have it repaired for you. We can make the few adjustments necessary and have it running in tip top shape in a couple of days," suggested the manager.

"No. We want to return it. We wouldn't be contented with it now, knowing that it had to be repaired almost as soon as we got it. We would be afraid that something else would go wrong with it again," said the older girl. "Do you have any other models we might exchange it for?"

"Yes we do, and if you'll step over here I can show you some of the new models. We will make the exchange and I'm sure you will be satisfied," said the manager of the appliance store, leading the way to the radio display.

After looking over the new models the girls selected a more expensive radio phonograph than the one they were returning. They gladly paid the difference, and even insisted on paying for the repair job on the plug they had damaged. When they left the store they were well pleased with the adjustment and the store manager was sure he would receive their future business for records and repair jobs.

This case could be contrasted with countless other examples of appliance stores that do not handle returns and adjustments in a manner that will build good will. Many appliance stores fail to realize the possible results that exist for binding the customer closer to the store by handling returns and adjustments properly.

By following the seven point program outlined in the following section for handling returns and adjustments many appliance dealers can turn returns into dollar profits and build good will for future sales. The transaction will be handled in a more pleasant, quicker, and easier manner if these rules are followed.

1. *Assume the customer's claim is justified*: Surveys conducted on returns and allowances have revealed the fact that 95% of the returns and adjustments sought in retail appliance stores fall in this category. Customers hesitate to make a return or seek an adjustment unless they feel that they have a just complaint.

It is just as unpleasant for the customer to make a return as it is for the dealer to handle, the complaint. In fact some customers who feel that they have a claim that is justified don't take the merchandise back because of the trouble they have had in the past. These customers don't give the store a chance to rectify a mistake or faulty merchandise.

2. *Give the customer a chance to tell the whole story*: Most customers returning merchandise come into the appliance store all steamed up over the injustice done them. If the customer has a chance to tell the whole story without interruption it gives their steam pressure a chance to return to more reasonable levels before some settlement is made.

Interruptions during the story of the customer cause them to go back and repeat it for fear they have omitted some detail. With each re-telling the importance of the injustice takes on added emphasis. Needless repitition is eliminated and the transaction can be handled much quicker if the customer is not interrupted.

3. *Make plans for the adjustment offer*: To save time in making the final adjustment and give the customer a feeling of confidence in the offer presented some appliance dealers have discovered that it is a good idea to develop a plan of action while the customer is telling the story. With this method the dealer knows just exactly what he is going to say when the customer has finished talking and can make an offer in a confident manner.

4. *Make a quick decision*: Customers are taken off guard when appliance dealers employ this technique. Usually they feel they will have to present further arguments before they can gain their point, and when a quick decision is offered they are most pleasantly surprised.

By delaying the action in making a decision on the adjustment the customer doesn't feel that the store is interested in his problem. They think the store is either stalling or trying to out-smart them. Quick decisions give the customer the impression that the dealer is being fair and just.

5. *Let the customer suggest a settlement*: Many times even after making a quick decision the customer is not entirely satisfied with the offer. To handle this problem some appliance dealers have found it a good idea to let the customer make a suggestion of what they want. Usually this is fair and in some cases may be less costly than the one offered or planned to be offered by the dealer.

For example, in the case cited about the radio-phonograph, the girls really wanted a better radio and this gave them an excuse for buying it. The settlement they suggested was much better for the store than the possibility of a repair job and future trouble because they were dissatisfied.

(*Continued on page 89*)

Safe Street Lighting Pays

—IN CANCELLED ACCIDENTS

The cost of traffic accidents is the largest item in street maintenance. The economic waste from automobile accidents in this country exceeds $1,250,000,000 annually . . . and 60% of the traffic fatalities occur at night.

How can we handcuff America's No. 1 public killer and cancel a large percentage of these accidents? The answer is *planned street and highway lighting.* It is estimated that for $2.40 per capita an adequate Traffic Safety Lighting Program can be inaugurated.

Call your local Westinghouse Distributor for information about street lighting. *A Westinghouse Sales Engineer will gladly co-operate with you and your electrical contractor in the development of a plan.*

J-04205

YOU CAN BE SURE
IF IT'S Westinghouse

THE NEW
OV-20
New, high-efficiency mercury lamps provide higher light intensities per dollar invested. The entirely new optical system gives more effective light control than conventional mercury luminaires.

COMMERCIAL • INDUSTRIAL • FLOOD • STREET • AVIATION

Westinghouse Planned Lighting *Pays*

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

LIVE DISPLAYS alone are not enough for the competitive appliance merchandising market, according to K. E. Hermann, appliance buyer at the W. A. Green Company, Dallas, Texas. While this method of demonstration has proved a valuable way of helping the customer visualize how the appliance will look in her own home, it should be only a part of the salesman's strategy. A salesman who demonstrates electrical appliances must be familiar both with the lines he is selling, and, even more important, the lines he speaks to the prospective customer.

The main job of a demonstrator is presenting, in as simple and effective a manner as possible, the advantages of the appliance he is selling. This should be done in a way which is easily understood by those who are not familiar with technical terminology.

In order for a salesman to present a successful demonstration, he must first know exactly what he is going to say. The best way to accomplish this is to have a carefully planned and rehearsed outline to study, and if he is inexperienced, perhaps it would be best for him to write out the entire demonstration. The main thing is to avoid monotonous repetition of facts on the salesman's part, instead of trying to encourage as much customer participation as possible.

One good plan is for the salesman to write down all the more important features of the appliance. When these notations are completed, the demonstrator should go to the appliance to be sold, and there time each fact in his notes with the corresponding feature on the appliance. For example, in demonstrating a home freezer, the salesman might mention the fact that the unit has counter-locking hinges which hold the lid up, and as he describes this he would simultaneously lift it to illustrate his point. This same timing could be followed on each feature of the appliance.

A good salesman will know something about the comparable features of appliances other than those he sells. It is wise for him to be familiar with these facts for some customers may notice the lack of features that are incorporated in other models and demand a reason. To extricate himself from this situation, the salesman can admit these features, but quickly point out additional advantages on the machine at hand. And to do this effectively, he must be thoroughly familiar with every function of his own machine.

Mr. Hermann, of the Green Company, contends that many women are not aware of the fact that a shirt which requires 20 minutes to half an hour for ironing with a hand iron can be finished in 4 minutes on the electric ironer. Similarly, they do not know that the ironer can be used for such difficult items as lace curtains, ruffled dresses, children's clothes, etc., with equally satisfactory results. And here lies the value of a salesman who knows how to competently operate the machine in his demonstrations. Mr. Green feels that almost every time a salesman takes enough time to illustrate these various uses of the ironer he makes a sale.

It might be well for the salesman to remember that in making an appliance demonstration it is best if he does not monopolize all the time himself. To be sold, the customer must have a part in the proceedings. One of the simplest ways to bring the prospect into the sales talk and demonstration is by having him do some-

The main job of the demonstrator is presenting, in as simple and effective a manner as possible, the advantages of the appliance he is selling. Getting the customer to participate helps to close the sale.

The importance of the salesman's demonstrating ability cannot be overemphasized, but his sales story must be thorough and effective. When these two factors are carefully co-ordinated, he will have a successful selling formula.

thing. When, for example, the salesman points out how easily a refrigerator door opens, he could have the customer try the door for himself. By participating in this way, he more readily believes the salesman, and is literally selling himself on the appliance.

The small town appliance dealer has an advantage, of course, in knowing many of his customers, and, being familiar with their needs, he is in a better position to demonstrate the appliance that will interest them. It is also easier for him to avoid a stilted, formal presentation of his sales talk, which is a failing of some salesmen. A customer is quick to recognize a disinterested or mechanical attitude on the salesman's part, and will often go to another store to make his purchase if sufficiently displeased. Each prospect should be approached as an individual selling problem. In delivering his sales talk, the salesman should adopt a friendly, informal manner, giving the impression, at the same time, that no other appliance on the market surpasses his in quality and performance.

A well-planned sales story on one appliance can easily be applied to other appliances. By changing the necessary words which apply to particular features on one appliance, others can be demonstrated and sold. The important thing is to have a good story to tell; one that will make a favorable and lasting impression on the customer.

One point in selling which is easily overlooked is the tendency of some salesman to either oversell or undersell the customer. If, through overselling, the customer buys a refrigerator, home freezer, or any other appliance that does not meet the re-

(Continued on page 88)

When Dealer Frank Kramer told a prospect the refrigerator's door was "as strong as a horse," he followed right up with a demonstration. Some dealers might consider this carrying the point too far but there's no denying that it dramatized the point . . . but effectively.

CATALOGS and BULLETINS

Available Free to Readers of Electrical South upon Request

282—Cords and Cables. The Simplex Wire & Cable Co., has just issued an attractive 68-page catalog giving descriptions of the Simplex-Tirex portable cords and cables. Complete information on splicing is also included, as well as a pictorial section on applications. It may be obtained from 79 Sidney St., Cambridge 39, Mass.

283—Reed Unit-Fans. A new 16-page booklet on unit-fans has been published by Reed Unit-Fans, Inc., 1001 St. Charles Ave., New Orleans 8, La. This booklet describes the design of the Reed reversible unit-fan and how by adding various attachments it serves all purposes and uses.

284—Electrical Specialties. A catalog, No. 43, showing their complete line of electrical specialties is available from McGill Mfg. Co., Inc., Box 650, Valparaiso, Ind. Included is descriptive data on the many sizes and types of Levolier switches and McGill portable and vaporproof lamp guards.

285—Switches and Outlets. Literature giving information on prices, construction and quality of the toggle switches, duplex outlets, and flush plates manufactured by All-Plastic Manufacturing Company, Box 2135, Terminal Annex, Los Angeles 54 Calif., is now available upon request. Samples are also available upon request.

286—Porcelain Insulators. A loose-leaf catalog of porcelain insulators and pole line hardware is available from Illinois Electric Porcelain Co., Macomb, Illinois. In addition to the pages of product specifications, the catalog contains a special section of useful tables and a copy of the AIEE Standards on Insulator Tests.

287—Condensed Lighting Catalog. This 8-page descriptive bulletin issued by Pittsburgh Reflector Co., 450 Oliver Bldg., Pittsburgh 22, Pa., describes in detail the most popular items in the Pittsburgh line of fluorescent and incandescent lighting equipment. Each item is fully illustrated and cataloged, and many are accompanied by installation drawings.

288—Unit Heaters. A 16-page catalog, No. EC-4, describing the complete line of Electromode unit heaters from 1500 watts to 60,000 watts, has just been released by Electromode Corp., 45 Crouch St., Rochester 3, N. Y. The book is illustrated with pictures of installations, heaters, controls, and wiring diagrams. It also carries a Heating Analysis Sheet to assist in solving industrial heating problems.

289—Air Cooled Transformers. Bulletin 1246, available from Sorgel Electric Co., 832 W. National Ave., Milwaukee 4, Wis., describes the latest development in dry type transformers for indoor installation, ¼ kv-a to 1000 kv-a, single-phase and three-phase, with voltages from 115 volts to 13,200 volts.

290—Receptacles, Plugs, and Connectors. Russell & Stoll Co., Inc., 125 Barclay St., N. Y., has released a bulletin No. EL-4-46, describing the new Ever-Lok receptacles, plugs and cord connectors for 30 amperes, 440 volts, a-c. Typical uses are for heavy duty industrial purposes.

291—Home Freezers. Full information on the Orley Sixteen, with a 16 cubic ft. capacity, and the Orley Super-Seven, with a 7½ ft. capacity, is available from Orley Freezers Inc., 475 Schaefer Road at Oakwood, Detroit 25, Mich.

293—Residential Lighting Fixtures. A complete and diversified line of incandescent lighting fixtures is illustrated in Catalog No. 47, which may be obtained from the Puritan Lighting Fixture Co., 21 Boerum St., Brooklyn, N. Y. or from the southern agent, Al Orlick, P. O. Box 1033 Sanford, N. C

296—Building Wire. A fully illustrated 48-page booklet called "Hazard Building Wires" is now available from the Hazard Insulated Wire Works Division of The Okonite Co. The manual contains complete engineering information on the many types of wire and cable required by the building industry. Tables showing dimensions and weights of all cable constructions are included as well as a section devoted to valuable engineering data.

297—Wire and Cable. An illustrated booklet containing descriptions of thermoplastic building wires, rubber-insulated and leaded building wires and cables, Flamenol cords, rubber cords, Neoprene cords, and many other items has been published by the General Electric Co., Bridgeport 2, Conn.

298—Propeller Fans. Features, performance tables, dimensions, and accessories are included in a handy, comprehensive bulletin, No. 2444, issued by The Herman Nelson Corp., Moline, Ill. All fans rated in accordance with ASHVE and NAFM Standard Test Code.

299—Brush Control. "ABC of Chemical Right-of-Way Maintenance" is the title of a four-color booklet recently issued by the Asplundh Tree Expert Co., Jenkintown, Pa. It describes clearly the killing effect of Asplundh's new, exclusive, and simplified method of chemical brush control.

300—Shutters & Dampers. A 12-page catalog (No. 46) is available from the Elgo Shutter & Mfg. Co., 2738 W. Warren Ave., Detroit 8, Mich., describing the 17 different types of shutters and dampers manufactured by them, and as used in connection with ventilating and air-conditioning installations.

301—Air Conditioner. Specification sheets including complete data on 1/2 and 3/4 HP self-contained room air conditioners for window sill installations are available from Fedders-Quigan Corp., Buffalo 7, N. Y. Functions of those conditioners are cooling, dehumidification, filtering, circulation, and ventilation.

302—Attic Fan. A new bulletin describing the complete Wind-Way attic fan system for every size home has been made available by Wind-Way Fan & Ventilator Co., 531 St. Joseph St., New Orleans, 13, La.

303—Door Chime. Informative data on an electric door mat and chime combination for both home and office may be obtained from Brockman Sales Co., Dept. C, 314 29th St., South St. Petersburg, Fla.

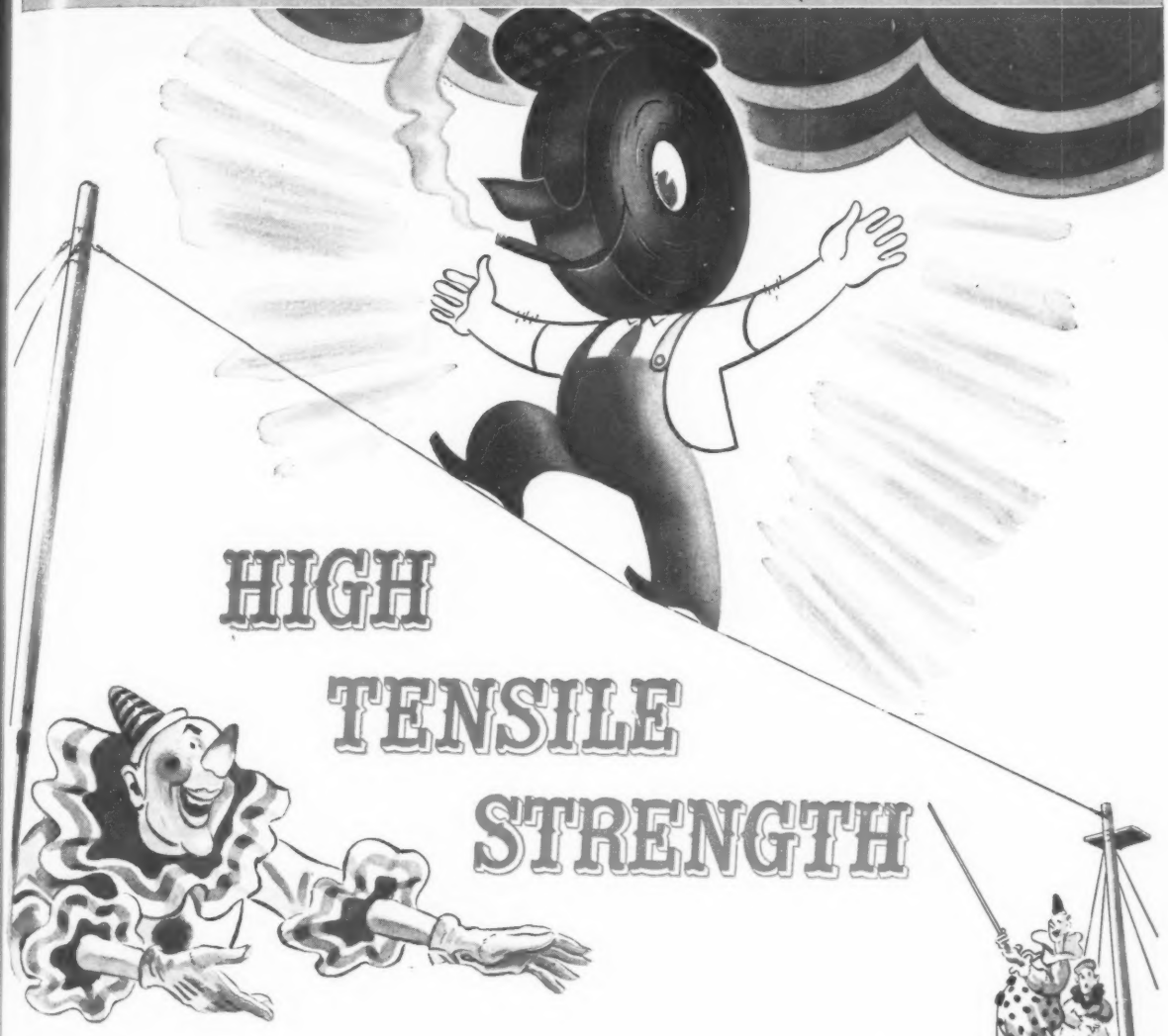
304—Coil Equipment. Specialized equipment for rewinding and repairing motor and generators is described in a series of data sheets released by Potter & Rayfield, Inc., 1570 Northside Dr., Atlanta, Ga. Described are such items as coil winders, wire racks, insulation folders, and other devices.

305—Electrical Materials. Three informative bulletins, No. 1 entitled Lightning Arresters Data; No. 2, Wire Stringing Tool Data; and No. 3, Hub Rak Data on Secondary Distribution, have been released by Hubbard and Co., Pittsburgh 1, Pa.

306—Wiring Devices. Fully illustrated catalog sheets, complete with specifications are included in a folder made available by Bauman-Worth Corp., 57-75 Thames St., Brooklyn 6,

UNITED STATES RUBBER COMPANY

SERVING THROUGH SCIENCE



HIGH TENSILE STRENGTH

That's Security Friction Tape!

Security's high tensile strength comes in handy on the tougher jobs. This electrical and general purpose tape has no pin holes—does not ravel when unwound from the roll —tears straight. Highly di-electric, Security Friction Tape has a strong, rubbery adhesive that *sticks and holds.* In factory, office or home, Security can help you in dozens of ways.

Play Safe - Use Security

UNITED STATES RUBBER COMPANY

1230 Avenue of the Americas, New York 20, N. Y.

N. Y. Among the items described are a variety of sockets, receptacles, wall plates, switches, etc.

307—Portable Radiator. The advantages of the Electresteem portable radiator are illustrated by means of questions and answers in a folder made available by Electric Steam Radiator Corp., 1 Electric Ave., Paris, Ky.

308—Connectors. A 24-page, three-color catalog describing K & H solderless terminal lugs and connectors may be obtained from Krueger & Hudepohl, 5 East Third St., Cincinnati 2, Ohio. A wealth of information, including specifications, descrip-

309—Busduct Data. Various applications of the FA busduct for industrial purposes are illustrated in this 31-page bulletin made available by the Frank Adams Electric Co., St. Louis, Mo. Also included are charts and diagrams which give voltage drop and all other pertinent information concerning this product.

310—Fuses. Listed by Underwriters' Laboratories, the Pierce renewable fuses are fully described in an illustrated folder which may be obtained from Pierce Renewable Fuses, Inc., 211-219 Hertel Ave., Buffalo 7, N. Y.

312—Fans. "The New Bar-Brook Model H Breezebuilder Fans" is the title of a new folder issued by the Bar-Brook Manufacturing Co., Inc., of Shreveport, La. Expressly designed for horizontal mounting, the Model H Fan Units are described, with detailed installation instructions and diagrams.

313—Power Units. Form 647, available from the Kato Engineering Company, Mankato, Minn., describes in detail the company's lighting plants, motors, rotary converters, and a-c generators, 500 watts to 175 kw. Also given are dimensions, weights, electrical specifications, and current prices.

314—Fan Units. G-M Laboratories, Inc., 4300 N. Knox Ave., Chicago 41, Ill., have released catalog pages of description on each of the four fan and fan and heater units currently in their line. Informative and well illustrated, these pages list the sizes, characteristics, prices, etc., of each model.

315—Transformers. Twenty-four pages are devoted to complete ratings and catalog numbers on all voltage classes plus comprehensive data, dimensions, and illustrations of this company's conventional, single-phase distribution transformers. Hangers, kickers, and other accessories are described and illustrated. This booklet may be obtained from the Line Material Company, Milwaukee 1, Wis.

316—Fractional Hp Motors. Electro Machines, Inc., 54 North 3rd St., Cedarburg, Wis., has available informative data sheets describing their line of fractional horsepower electric motors ranging from 1/20 to 2 hp.

317—Air Circulators. Illustrated catalogs and booklets giving complete information on the Marsalis line of exhaust fans, air circulators, fluid pumps, and air conditioners (evaporative type) are now available from American Metal Products Co., 4901 Marsalis Ave., Fort Worth, Tex.

318—Lights and Reflectors. A compact, pocket size electrician's handbook showing a complete line of flood lights and reflectors may be obtained from the S & M Lamp Co., 119 W. 36th Place, Los Angeles 7, Cal. This is the 1948 edition of EH catalog.

319—Lighting. Complete specifications, price information, and accessories are shown in a 28-page pocket-sized book especially designed as a selling guide for electrical distributors, electrical contractor-dealers, architects, and utilities. This catalog is available from Dept. P. R., Mitchell Manufacturing Co., 2525 Clybourn Ave., Chicago 14, Ill.

320—Wire Connectors. Ideal Industries, Inc., Sycamore, Ill., are offering a 12-page catalog fully illustrating and describing Ideal solderless, tapeless wire connectors and their application by electrical contractors and manufacturers. Complete information, telling how Ideal wire connectors should be selected and applied, is also included.

321—Recessed Troffers. Catalog No. T-48 contains 36 pages illustrating all types of one, two, and three light 40 watt fluorescent, deep and shallow type troffers. Included are incandescent Highliters for accent lighting between runs with complete photometric data, dimensions, weights and their flexibility of application. Available from the Ender Mfg. Co., 260 West St., New York, N. Y.

322—Upright Scaffolds. A descriptive folder is available describing the setting up of a 15-foot aluminum-alloy mobile unit by one man in three minutes and a 45-foot unit in 15 minutes. May be obtained from Up-Right Scaffolds, 1013 Pardee Street, Berkeley, California.

323—Lighting Fixtures. Colorful illustrations, specifications, and a price list are all included in a 9-page catalog released by the Glatthar Lighting Company, 949 East 72nd St., Cleveland 3, Ohio. A wide variety of Glatthar Twinline matching units is shown.

324—Lamps and Accessories. Incandescent and fluorescent lamps, starters, cartridge fuses, plug fuses, and Scru-its are described in a comprehensive booklet issued by the Solar Electric Corp., Warren, Pa. Complete specifications are featured in addition to a price list and suggestions for promotional activities on the part of the dealer.

325—Ballasts. Twenty-six pages are devoted to a discussion of good fluorescent lighting and its many components in a highly informative bulletin (GEA-4950) released by General Electric. Specifications for the use of all types of general lamp ballasts are listed, including Slimline instant-start ballasts and Circline ballasts. The brochure may be obtained from the Apparatus Department, General Electric Co., Schenectady, N. Y.

326—Wiring Devices. Bulletin No. 17, released by the M. & W. Electric Mfg. Co., Inc., East Palestine, Ohio, contains descriptions and illustrations of M. & W. cable connectors, grounding devices, and newly developed cable racks. Twenty-three pages in length, the booklet is designed for easy reference.

327—Lighting Fixtures. A sixteen-page, two-color catalog illustrating adjustable lighting fixtures, as well as recessed fixtures, has been made available by Swivelier Co., Inc., 28 Irving Place, New York 3, N. Y. When requesting the catalog, designate Bulletin No. 122.

328—Multiflex Brushes. The Helwig Company, 2544 North 30th St., Milwaukee 10, Wis., has just issued catalog No. 245 which lists brushes by code numbers. This simplifies the ordering of the proper brushes.

329—Lighting Fixtures. A colorful, well illustrated, 32-page catalog has been made available, featuring industrial, commercial and residential lighting with technical description and engineering data. The catalog, No. 45, may be obtained from the Keystone Mfg. Co., 2228-36 E. Tioga St., Philadelphia 34, Pa.

330—Lighting Equipment. Appleton Electric Company announces the release of Catalog No. 48, covering the line of lighting equipment formerly manufactured by the Goodrich Electric Company, of Chicago, which has been taken over by them. It may be obtained from the Appleton Electric Co., 1701-59 Wellington Ave., Chicago 13, Ill.

331—Cords and Cables. New illustrated catalog sheets and descriptive pamphlets showing advantages of Bronco 60 Neoprene cords and cables have been made available by Western Insulated Wire Co., 1101 E. 6th St., Los Angeles 1, Cal.

ELECTRICAL SOUTH.
1016 Grant Building **November, 1948**
Atlanta 3, Ga.

Gentlemen:

Please send me bulletins indicated below.

No..... No..... No..... No..... No.....
(Print Plainly)

Name..... Title.....

Company.....

Address.....

City & State.....

New Electrical Books

Radio Industry Red Book

Published by Howard W. Sams & Co., Inc. 2924 E. Washington St., Indianapolis 7, Ind. 440 pages. Price, $3.95.

COMPLETE DATA is given on all radio receiver replacement parts, covering approximately 17,000 models from the years 1938 to 1948, in this complete, authoritative volume for the radio repair industry. This is the first listing of all nine major components in one book; it covers tubes, capacitors, transformers, controls, IF coils, vibrators, speakers, batteries, and phono cartridges, plus valuable installation and servicing notes.

All the data is arranged in a concise, easy-to-use form in an 8½" by 11" volume, fully indexed for quick reference. 17 leading parts manufacturers are represented.

Industrial Electronics Reference Book

Published by John Wiley & Sons, 440 Fourth Ave., New York 16, N. Y. 680 pages. Price, $7.50.

PREPARED by electronics and research engineers of the Westinghouse Electric Corporation, the reference book contains 36 chapters on the basic theory of electrons and the design, application and maintenance of electronic equipment in industry. This handbook includes within one cover all the technical data needed to understand the scope and limitations of electronic equipment as used in industry. It will be useful to engineers faced with the problems of approving or rejecting industrial electronic equipment.

The chapters, all well illustrated, were written by engineers and research scientists. They include Dr. W. E. Shoupp, manager of electronics research for Westinghouse, a co-discoverer of photo-fission of uranium atoms by gamma rays, and Dr. Harvey Rentschler, retired director of Westinghouse lamp and electronic tube research—the man who developed the Sterlilamp which kills airborne bacteria by ultra-violet radiation.

Besides presenting underlying theories and design factors, the book brings the electrical engineer up to date on developments in electronic instruments, motor control, dielectric heating of woods and plastics, resistance welding, X-ray and photo-electric devices and many other fields of electronics.

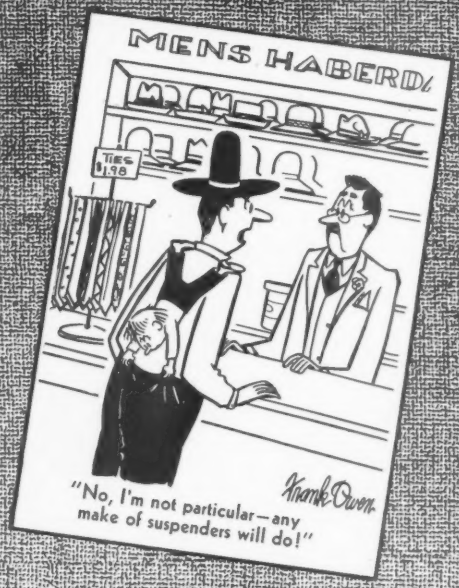
White Way

America's Newest Washer

DEALER INQUIRIES INVITED

CONLON BROS. MFG. CO.
Builders of Fine Washing Machines, Exclusively
4512-18 W. Fillmore • Chicago 24, Illinois

Your Work Can Wait!

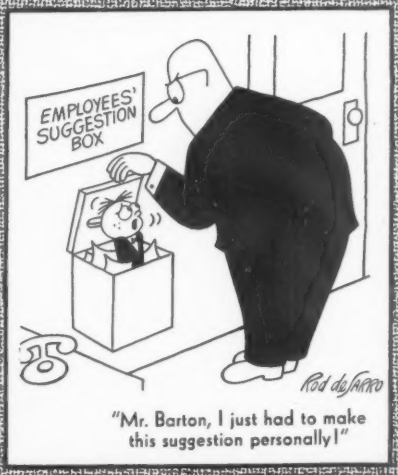


"No, I'm not particular—any make of suspenders will do!"

"Now here's a book on child psychology that really gets results!"

"I didn't know you were in the hospital last year Sheppard—what month was it?"

"Recommendation? Well- I brought this from the last place I was secretary at!"



"Mr. Barton, I just had to make this suggestion personally!"

Direct Shipments From Mill To Job Or Warehouse. Southern Electrical Steps Up Service With Overnight Delivery to Southeastern States

IN THE HEART OF THE SOUTH

Serving Southern Utilities With Quality Conductors

FOR

Transmission and Distribution

With the completion of its new modern wire mill Southern Electrical Corporation is now equipped to produce the finest conductors of copper and alumnum wires and cables in sizes ranging from 14 ga. to the largest standard strands in circular mils.

SOUTHERN ELECTRICAL CORPORATION

P. O. BOX 989 Telephone 7-3325 CHATTANOOGA, TENN.

QUESTIONS AND ANSWERS CODE

Problem No. 1101

Question: What voltage is permitted on branch circuits?

Answer: Ordinarily fixtures and 15-ampere receptacles are to be supplied at not more than 150 volts to ground. Exceptions: (1) In industrial establishments, not more than 200 volts to ground for mogul-base, screw-shell lampholders, or for other types of lampholders approved for the application, mounted not less than 8 feet from the floor, which do not have switch control as an integral part of the fixture. (2) In railway properties (Section IIII). (3) For infrared industrial heating appliances (Section 4237).

In dwelling occupancies circuits for light, appliances, and receptacles are to be supplied at not more than 150 volts between conductors and 150 volts to ground. Exception: Voltage between conductors may exceed 150 volts only for permanently connected appliances or portable appliances of more than 1,650 watts. Section 2113.—J. D. Brooks.

* * *

Question: What are heavy-duty lampholders?

Answer: Edison base lampholders of the mogul type (Section 2114) and other lampholding devices required for lamps of more than 300 watts. Section 94103.—J. D. Brooks.

* * *

Problem No. 1102

Question: How do I determine the minimum number of branch circuits required?

Answer: See Section 2115. There are three general rules. (1) The number of circuits must be sufficient to carry the total computed load and also the actual load. It will be necessary to see which is the greater. Allowance must be made if circuits do not operate at 100 per cent power factor or if they operate continuously. The load must be proportioned among the circuits. For general lighting in dwelling occupancies a 15-ampere branch circuit for each 500 square feet of floor area is recommended. (2) For dwelling occupancies, there must be provided for the small appliance load in the kitchen, laundry, pantry, dining room and breakfast room, one or more branch circuits for all receptacles outlets in these rooms (other than outlets for clocks). Such circuits shall have no other outlets and the conductors must be not smaller than No. 12. (3) For any other loads, individual circuits must be provided.—J. D. Brooks.

* * *

Problem No. 1103

Question: What is the smallest feeder permitted?

Answer: There are three requirements: (1) The feeder capacity must be not less than the computed load. Tables 1 & 2. (2) If more than one branch circuit connects to a feeder leg, the feeder must be at least No. 10. (3) If only one feeder carries the entire load on the service, the feeder must be at least No. 8, except where services are permitted to be smaller (No. 12 or No. 10 is permitted for a single circuit. Section 2304.) the feeder may be of the same size as the service.—J. D. Brooks.

* * *

Problem No. 1104

Question: What are the Code requirements for voltage drop?

Answer: None. It is recommended that feeders carrying lighting have not more than 1 per cent drop and feeders carrying power only have not more than 3 per cent drop. Section 2202. Section 4312 recommends that motor circuit sizes be increased to avoid excessive drop on long runs. Note 8, following Tables 1 & 2, states that voltage drop has not been considered in setting up the allowable current-carrying capacities. For two-wire circuits the formula for finding the drop in volts is:

$$\frac{L \times I \times 21.6}{CM} = \text{volts drop}$$

where L is distance one way in feet, I is amperes, and CM is size of wire in circular mils. For three-phase circuits 19 is used instead of 21.6. The factor 21.6 is based upon the mil-foot resistance of copper (one foot in each side of the circuit) of 10.8 ohms.—J. D. Brooks.

* * *

Problem No. 1105

Question: What splices are permitted in service-entrance conductors?

Answer: (a) Solderless, bolted or clamped connections in a meter enclosure, (b) taps to mains or equipment, (c) splices to extend underground service conductors to equipment in another form of cable or raceway, and (d) connections at the service drop and at the service entrance conductors for an outside meter on an existing installation. Section 2304.—J. D. Brooks.

* * *

Problem No. 1106

Question: What conductors may be installed in a service conduit?

Answer: (a) Service conductors, (b) grounding conductors and (c) control wires from time switches, if they have overcurrent protection. Section 2306.—J. D. Brooks.

* * *

Problem No. 1107

Question: What is the smallest service entrance conductor size permitted?

Answer: Not smaller than required for the net computed load and no smaller than No. 8, except that for a single circuit No. 12 and No. 10 are permitted. Section 2304.—J. D. Brooks.

●

A series of Questions and Answers on the Natioal Electrical Code will appear as a regular feature in forthcoming issues of this publication.

Readers are invited to send in Code problems and questions upon which they would like to have expert opinion.

Discussion from readers on any of the questions published will be welcome.

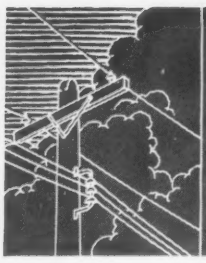
NEW Westinghouse 85-WATT FLUORESCENT LAMP EQUALS OUTPUT OF 100-WATT LAMP

USE OF KRYPTON GAS INCREASES EFFICIENCY 17%; NEW LAMP OPERATES IN PRESENT 100-WATT FIXTURES

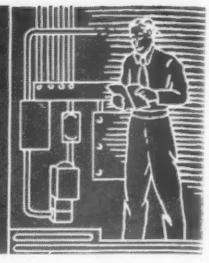
This new Westinghouse lamp produces 49.5 lumens per watt, as compared with 42 lumens per watt for the 100-watt lamp which it replaces. The new unit has an average life of 6,500 hours at 12 hours per start.

The 85-watt fluorescent lamp is five feet long, 2⅛ inches in diameter, and offered in five hues of white light—daylight, 4500 degree white, standard white, soft white, and the new warm white. For more information about this new money-saving lamp, call your Westinghouse Lamp Distributor or write to Lamp Division, Westinghouse Electric Corporation, Bloomfield, New Jersey.

YOU CAN BE SURE... IF IT'S Westinghouse
the name you know in LAMPS



NEWS BRIEFS
OF THE INDUSTRY



Southeastern Sales Conference in Atlanta

More than 300 light and power company executives, electrical manufacturers' representatives, and electrical wholesalers are expected to attend the general sales conference of the Southeastern Electric Exchange to be held at the Atlanta Biltmore Hotel, November 10 to 12, 1948.

This is the first year that the distributors of electrical appliances throughout the Southeast have been invited to attend this annual three-day conference. The new policy indicates a recognition of the importance of the distributors to the light and power companies from a load building viewpoint.

The first day of the conference, November 10, will include concurrent sessions of the various committees comprising the sales section of the Exchange.

These groups and their presiding officers include: Residential and Rural Sales Committee, Chairman W. B. Farnsworth, Vice-Chairman E. T. Moore; Commercial Committee, Chairman W. B. Shenk; Vice-Chairman Luther T. Cale; Industrial Power Committee, Chairman J. Mason Guillory, Vice-Chairman D. B. Hyer, Jr.; Advertising Committee, Chairman Roy H. Knox, Vice-Chairman J. W. Kling; and Agricultural Development Committee, Chairman Percy Miley, Vice-Chairman Neil Bolton.

The general meetings to be attended by all groups will be held on Thursday and Friday, November 11 and 12. Presiding over the sessions will be Chairman Les M. Taylor, vice-president, Mississippi Power & Light Company, Jackson, and Vice-Chairman H. E. Cox, vice-president, Birmingham Electric Company, Birmingham.

The general sales conference meetings will include addresses covering a wide range of subjects including selective selling, advertising and public relations, business trends, industrial power sales, and residential load building.

This overhead view of the four main assembly lines in Hotpoint's new electric range plant shows pushbutton ranges moving through inspection stations as they proceed to the warehouse for crating and shipping to the dealer. The new range plant contains one million square feet of manufacturing area.

Production Started At New Range Plant

The world's largest electric range plant incorporating revolutionary mass production techniques occupying one million square feet of manufacturing space was opened recently for formal operations in Chicago by Hotpoint, Inc.

James J. Nance, president, said that the new plant has a rated capacity of 600,000 ranges a year, and now is producing the industry's newest development in electric cooking—the push-button electric range. Nance addressed a group attending dedication ceremonies observing the plant's formal opening.

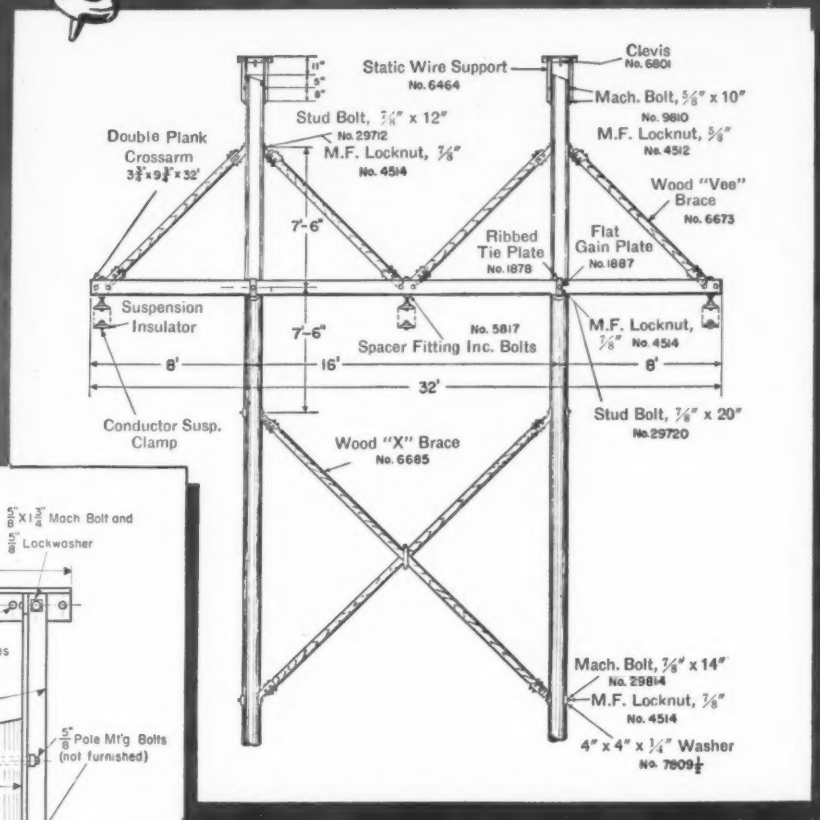
The beginning of formal production in the plant marks the completion of "the greater Hotpoint program," which required an investment of more than $20 million in new manufacturing facilities. Nance termed the new range plant "an investment in the future of electric cooking which sweeping acceptance has established as a dominant factor in the appliance industry."

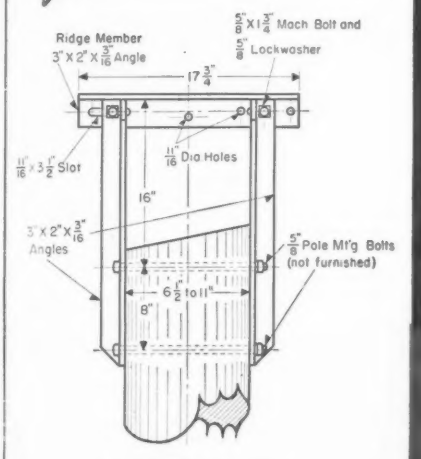
Farm Electrification Conference Scheduled

The spotlight will be focused on "meeting the farm family's needs electrically" when top level executives of agriculture, industry, merchandising, research and education assemble in the Congress Hotel, Chicago, November 17, 18 and 19, to attend the third annual National Farm Electrification Conference.

Only nation-wide event of its kind, the Conference will be attended by approximately 500 persons. Not a convention in any sense of the word, the annual meeting is a "work shop" of ideas and plans of action, all of which are aimed at directly benefiting the farm family and agriculture.

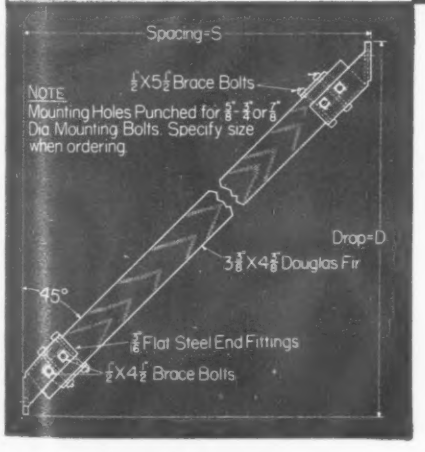
The program, under direction o





Static Wire Support
No. 6464

Typical Tangent Structure by HUBBARD


Spacing=S
NOTE
Mounting Holes Punched for 3/8" - 7/16" or 1/2"
Dia. Mounting Bolts. Specify size
when ordering.
1/2" X 5 1/2" Brace Bolts
Drop=D
3 1/8" X 4 1/8" Douglas Fir
45°
5/8" Flat Steel End Fittings
1/2" X 4 1/2" Brace Bolts

Hubbard "Vee" Brace
No. 6673

The H-Frame shown above consists basically of two poles of proper height and classification for 69 to 161 KV construction to which are attached two 3¾" x 9¾" x 32-foot Fir Cross Arms. Poles are slab-gained to a thickness of 7½-inches so that factory-assembled crossarms may be used. A No. 6464 Static Wire Support is mounted on each pole-top and No. 6673 Vee Braces are used to give added strength to the structure. The No. 5817 Steel Spacer Fittings serve a multiple purpose. They space the plank arms, provide a mounting point for the Vee Braces and are the points of suspension for the Insulator strings. No. 6685 Cross Brace is used to give transverse strength to the structure.

For detailed bill of materials, see your Hubbard representative or write to Hubbard and Company.

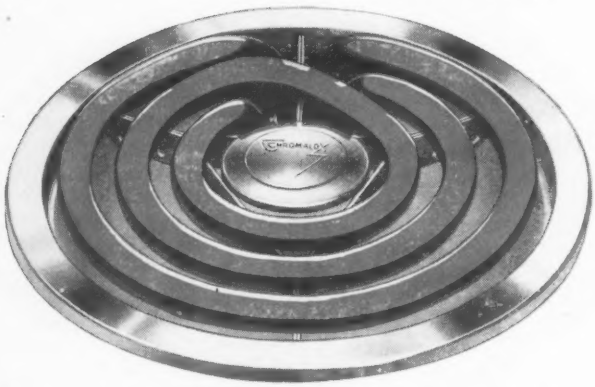
HUBBARD AND COMPANY

PITTSBURGH
CHICAGO

OAKLAND,
CALIF.

Another original Chromalox Feature

TWO UNITS IN ONE



Chromalox Triangulars

For ALL electric range-unit replacements

Service men everywhere say CHROMALOX Triangular Range Units are best by far. *And they are right!*

Here are range units that are quickly installed . . . that have *TWO* separately replaceable Inconel-sheathed coils . . . that give *more flat, contact cooking surface.* With a small stock of CHROMALOX Adaptor Rings you can fit *ALL* electric ranges regardless of make.

What's more—CHROMALOX Triangulars are *more profitable to sell* because smart housewives prefer them!

Send for
Chromalox Replacement Catalog
It shows you how you can make extra sales easily by "re-modernizing" old electric ranges with Chromalox Replacement Units.

A REAL SELLING POINT

2 Cooking Areas!
Housewives like the versatile heat selection and the "2 in 1" cooking surface they get with Chromalox Triangular Range Units for replacement.

On New Ranges and for Replacement

RC-31

CHROMALOX
means "Electric" Cooking at its Best

EDWIN L. WIEGAND CO. - 7600 THOMAS BLVD. - PITTSBURGH 8, PA.
C. B. Rogers, 1000 Peachtree St., N. E., **Atlanta, Ga.**; L. R. Ward Co., 2711 Commerce St., **Dallas 1, Texas**; 932 M & M Bldg., **Houston 2, Texas**; 1511 Louisiana St., **New Orleans 15, La.**; 1239 Frankfort St., **Tulsa 5, Okla.**; W. R. Phillips, P. O. Box 2561, **Raleigh, N. C.**; W. R. Phillips, Jr., 3125 Lamb Ave., **Richmond 22, Va.**; Chilton & Chilton, 4126 N. State St., **Jackson, Miss.**

George A. Rietz, of Schenectady, N. Y., manager of the Farm Industry Division, General Electric Company, will feature addresses by several of the nation's outstanding farm electrification leaders and panel discussions devoted to a number of the most difficult problems faced today in putting electricity to maximum use in the farm home and for farm production.

Frank E. Watts, of New York City, executive assistant of Farm Journal, Inc., chairman of the Conference, will set the "course" for the program in convening the first day's session. The address of welcome, "The Place of Extension Service and Agricultural Colleges in Farm Electrification," will be delivered by H. P. Rusk, dean of the College of Agriculture, University of Illinois.

Headline speakers will include John Strohm, internationally-known associate editor of *Country Gentleman*, who will deliver his first talk in this country after an extensive tour of agricultural sections "in front of and behind Europe's Iron Curtain;" A. W. Turner, assistant chief, Bureau of Plant Industry, Soils and Agricultural Engineering, United States Department of Agriculture; B. W. Clark, vice-president, Westinghouse Electric Corporation; Ervin Martin, national president, Future Farmers of America; Mrs. Charles W. Sewell, administrative director, Associated Farm Women; C. D. Leiter, sales manager, F. E. Myers and Bro. Co., and L. M. Knox, farmer.

Panels will feature farm women, editors and executives of major farm and electrical magazines, leading home economics specialists, retailers, distributors and wholesalers, power suppliers and manufacturers.

In addition to day-time meetings, plans have been made this year to conduct informal discussions and programs on Wednesday and Thursday evenings, November 17 and 18. It is expected that many of these discussions will be sparked by questions which members will be asked to deposit in a "question box" to be located in the main meeting auditorium.

McClurkin Is New Head Of Savannah Power Co.

CLAUDE C. CURTIS, for the past ten and a half years president of the Savannah Electric & Power Company, September 14th tendered his resignation at a meeting of the directors of the company, having reached retirement age under the company's retirement plan. L. C. McClurkin, 46,

a native Texan, but who came from Michigan following 28 years' experience in the electric power business in different parts of the country, was elected Mr. Curtis' successor as president and a director.

Mr. Curtis, who has been prominent in the business and civic life of the community, will continue to live in Savannah.

Mr. McClurkin recently resigned as president and general manager of

L. C. McClurkin

the Upper Peninsula Power Company of Houghton, Mich., which serves the northwest section of the upper peninsula of that state.

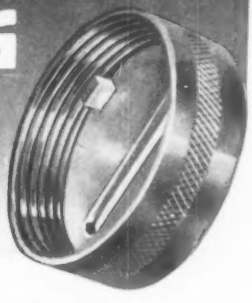
Since 1920 he has engaged in a number of positions with electric operating companies in various sections of the country. Until 1934 he was connected with the Gulf States Utilities Company which serves east Texas and southwestern Louisiana. During the succeeding years he was president and general manager of the Arkansas Utilities Co. in Helena, Ark., the West Coast Power Co., and the California Public Service Co., with headquarters in Portland, Ore., and then the Houghton County Electric Light Co., and its successor, the Upper Peninsula Co. with headquarters at Houghton.

Frostair Taken Over By Deepfreeze Division

Acquisition of the Frostair Duplex refrigerator from the General Tire and Rubber Company, has been announced by G. H. Smith, vice-president and general manager, Deepfreeze Div., Motor Products Corp., North Chicago, Ill.

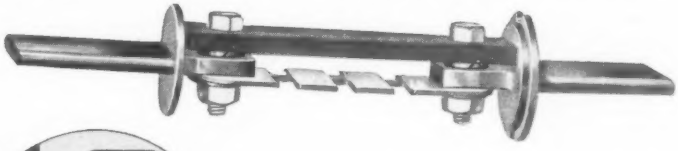
Mr. Smith stated that the acquisition of the Frostair refrigerator placed

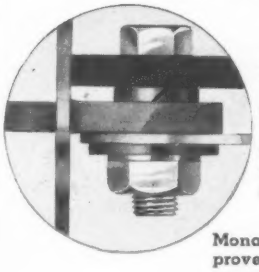
New POSITIVE LOCK
Construction of
Monarch Renewable
Fuses
Assures →
TRUE ALIGNMENT



The brass lugs inside the caps used on Monarch Fuses (see illustration at right above) fit into equally spaced slots in the brass casing inserts. This new and improved Monarch construction assures true alignment of the copper holding terminals . . . and establishes a positive lock on both ends of the fuse.

and for
STILL GREATER PROTECTION . . .





MONARCH'S Compressed Tension Lock Washer construction (illustrated at left) compensates for contraction and expansion of the fibre bar by exerting constant tension on the bar . . . and assures no loose parts. The washer also separates the fibre bar from the copper terminals . . . a spacer to provide better cooling.

Monarch Fuses are fully approved and are available through recognized wholesalers.

Specify Monarch Fuses
for improved
FUSErvice

MONARCH FUSE CO., LTD.
116 E. FIRST ST., JAMESTOWN, N. Y.

Don't sell ONE sell the GLATTHAR Twin-line

"MATCHING UNITS"

Fine lighting fixtures backed by seventeen years experience in lighting fixture design and manufacture.

MAX LENNY
Southeastern Representative

L. V. MAXSON
Southwestern Representative

Send for this FREE catalog

The GLATTHAR LIGHTING CO.

949 EAST 72nd STREET • CLEVELAND 3, OHIO

his company in a most advantageous position in the refrigeration industry by providing it with a combination refrigerator and home freezer, in addition to the company's regular extensive line of Deepfreeze home freezers.

Deepfreeze will offer present existing Frostair distributors a continuing franchise on the Frostair refrigerator alone, in order that they may continue their aggressive promotion through their regular dealers. In those territories not covered by Frostair distributors, the Frostair franchise will immediately be open to Deepfreeze home freezer distributors.

Mr. Smith further stated that the sale and distribution of the Frostair refrigerator will be under the direct supervision of F. F. Duggan, general sales manager, Deepfreeze Division.

Frostair national advertising and sales promotion will be absorbed by the Deepfreeze Advertising Department under the direction of R. V. Newbell, Deepfreeze advertising manager.

Market Outlook Summary Released by Curtis

A 5,000-WORD summary of the market outlook for home automatic clothes dryers has been issued by the Research Department of The Curtis Publishing Company.

The 14-page report reviews the development of both gas and electric dryers, and discusses operating costs, factors in determining purchase and advantages and disadvantages that have been claimed for both types of dryer.

The study says that from 2,600,000 to 2,800,000 dryer units is a "reasonable estimate" of what the industry can sell in the next six years.

Urban areas afford dryer manufacturers a greater volume of sales in the early stages of market development, according to the study, but in planning complete national distribution the industry cannot disregard the rural market.

A limited number of copies of the report are available upon request.

Large Scale Promotion By National Electric

AN EXTENSIVE advertising and sales promotional campaign to launch a new product into its line of electrical roughing-in materials is now being conducted by National Electric Products Corp., Pittsburgh, to introduce its Plug-In Strip.

National Electric recently completed field testing of the Plug-In Strip, a steel raceway having electrical outlets every 6 in. or 18 in. along its surface. The unit when installed on walls, counters or assembly benches provides a spread of electrical outlets

SIXTH RANKING DISTRIBUTOR IS LAUDED—Receiving congratulations from A. T. Wilson, center, regional manager for Bendix, are Fritz Becker, general manager, United Electric Service in Monroe, La., and Otis Flournoy, left, sales manager. This aggressive north Louisiana distrbutorship ranked sixth in the nation and second in the southern area.

for the convenient plug-in of lamps, radios clocks, signs, dictating machines soda fountain mixers, display turntables or small power tools.

Conventional advertising for wire, conduit and cable was withdrawn for the last three months of 1948. In its place, full-page advertisements in color were prepared for Plug-In Strip. These messages have been scheduled for trade and business publications. An easel presentation for salesmen's use; an electrical transcription for meetings, cards, blotters, folders have been provided so electrical wholesalers and contractors can be quickly given the complete Plug-In Strip story.

Cutler-Hammer Announces New Dallas Office Site

AN ANNOUNCEMENT has been made by Cutler-Hammer, Inc., Milwaukee, Wisconsin, pioneer electrical manufacturer, of new and expanded quarters for the company's Dallas district sales office and warehouse.

Located at 1331 Dragon Street, Dallas 2, Texas, in the Trinity industrial district, the new quarters provide improved facilities for the sale and distribution of Cutler-Hammer motor control and allied electrical products in the Dallas area. Mr. E. K. Anderson is Dallas district manager for Cutler-Hammer.

New Product Section Formed in NEMA

A NEW electrical product group, comprising nine companies nationally recognized as leaders in the young industry that manufactures electric household food waste disposers and dishwashers, is announced by the National Electrical Manufacturers Association.

Chairman of the group, known as the Household Sink Units Section, is R. C. Cameron, manager of the Dishwasher and Disposal Department of Hotpoint, Inc., Chicago.

Mr. Cameron pointed out that one of the major objectives of the section is to lay before the general public and sanitation and public health authorities the "many health-promoting factors inherent in mechanized food waste disposing and dishwashing equipment."

NEMA defines the section as encompassing "electrically operated food waste disposers, all sizes; electric free standing floor type dishwashers; electric combination dishwasher sinks; electric chassis or drop-in or undercounter types of dishwashers; all of

ILLINOIS PORCELAIN WIREHOLDER INSULATORS MAKE *Safe Service Connections*

Smooth, rounded surfaces protect wire insulation. Deep, sharp screw threads assure easy and firm installation. Non-shrinking metal alloy keeps screws permanently fastened to insulators. Special galvanizing process protects all-steel screws with smooth, even coating. No rust streaks on sides of buildings. These dry process wireholders available in sufficient styles and sizes to meet all requirements. Wet process porcelain supplied on special order.

Look for the name *Illinois* or the trademark on every porcelain product you buy. That's your assurance of the best in porcelain.

ILLINOIS GUY STRAIN INSULATORS

STANDARD TUBES
Glazed, unglazed, split, floor, split floor, headless, curved, crossover split, and crossover. Uniform inside and outside diameters. Sizes 1/2 to 48" long, 5/16 to 3" diameter.

KNOBS
Knobs that don't chip when installed. Cement coated, extra length nail—genuine leather washer—code standard. Wide variety of sizes.

CLEATS
Standard cleats of all sizes and types.

For best results use Guy Strain Insulators made by Illinois. These insulators are manufactured under rigid production control standards, from the careful selection of materials, through all steps leading to a top quality finished product. Uniform firing at constant temperatures eliminates internal stress. Available from large stocks of standard sizes.

ILLINOIS
ELECTRIC PORCELAIN CO.
MACOMB, ILLINOIS

M & W

General Purpose Solderless Ground Clamps

This brass malleable clamp takes solid wires from No. 8 to No. 4 inclusive. Fastening device consists of a 3/8" bolt with a 7/32" hole. This fastening method makes a positive and simple connection.

Send for copy of

BULLETIN 15

which illustrates our complete line.

THE
M. & W. ELECTRIC
MANUFACTURING
COMPANY
INCORPORATED

EAST PALESTINE, OHIO

the types generally used in residences."

Vice-chairman of the new section is Millard F. Foist, assistant sales manager of the Given Manufacturing Company, Los Angeles. John W. Hammes, president of the In-Sink-Erator Manufacturing Company, Racine, Wis., is chairman of the section's technical committee.

Other companies affiliated with the section are:

Appliance Division, National Rubber Machinery Company, Akron, Ohio; Thomas W. Berger, Inc., Cincinnati; Eureka Williams Corp., Bloomington, Ill.; General Electric Company, Bridgeport, Conn.; The Hobart Manufacturing Co., Troy, Ohio; and Westinghouse Electric Corp., Mansfield, Ohio.

Lighting Conference Features Dr. Harmon

THE FIRST School Lighting Conference sponsored by a University in the Southeast was held on the campus of the University of Georgia, Athens, August 9-11. The Division of Health and Physical Education and the College of Education secured the services of Dr. Darrel Boyd Harmon, consulting psycho-physiologist, as principal speaker. Miss Reta Lee, school lighting specialist with the Georgia Power Company, who has given invaluable service to the schools all over the state of Georgia, was instrumental in securing the conference for the University.

Over 200 school administrators, instructional supervisors, teachers, architects, illuminating engineers, health educators, physicians, and friends of education attended the three-day conference. The story of the Harmon Technique for securing the coordinated classroom which promotes optimum growth and development of the school child, was the principal feature of the meeting.

The Harmon Technique has grown out of ten years intensive research on 160,000 children in the State of Texas gathered while Dr. Harmon was director of the Division of Maternal and Child Health in that state. In certain experimental schools he claims through architectural improvements alone to reduce eye troubles nearly two-thirds, nutrition difficulties by 44 per cent, and chronic infection by 30 per cent.

One of the most shocking ideas brought out in the whole conference could be summed up in Dr. Harmon's own words:

"Our studies of in-school children compared with children of identical age not attending school, indicate that if we are concerned with the

The equipment required to create good classroom environment was on exhibition during the three days of the School Lighting Conference at Athens, Ga. The room featured modern fluorescent fixtures, light chalk boards, double-hinged translucent shades, special seating arrangement, and recommended finishes for floors, walls, and ceilings.

health of our children, it would be better to close our schools." The conditions under which children are receiving their education are conducive to malnutrition, chronic infection, eye defects, warping and twisting of bodies, and inferior scholastic achievement. He stated that too often our buildings are built for the convenience of janitors or from a maintenance standpoint and not for the well being of our children.

Dr. Harmon presented four steps to improve the environment of school children: (1) re-decoration to secure a maximum reflection of light with a minimum of brightness contrast; (2) control of daylight to properly diffuse it throughout the room; (3) properly installed artificial light to bring the quality and quantity of illumination up to that required for close visual tasks and (4) re-arrangement of seating to utilize daylight and eliminate dangerous glare and shadows.

Survey Shows Nashville To be Active Market

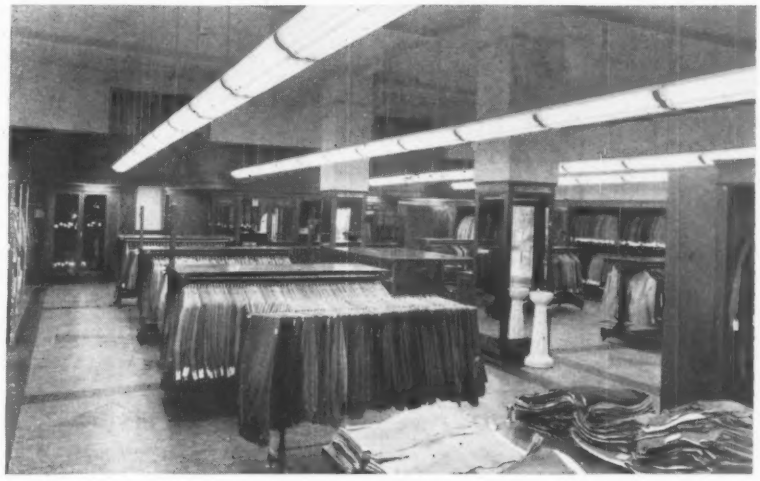
A 12 MONTHS sales summary for the year ending June 30, 1948 prepared by Nashville Electric Service, shows Davidson County to be one of the nation's most active markets for electrical appliances, with a total of $10,767,563 in retail sales. This summary, based on systematic reports from dealers and distributors, covers the appliance purchases of Nashville's 81,023 electric customers, of which 68,612 are residential.

Considerable gains were made in many items of large and small appliances, according to the figures released by Sales Promotion Manager W. D. Hall of the Nashville utility. Among major appliances, the most notable gains were in ranges, water heaters and refrigerators. Ranges were up to 38,031 in use wtih a gain of 6,051 units for the year; water heaters gained 4,873 units with 22,553 in use; refrigerators gained 7,298 unit with 55,208 in use.

Among small appliances, food mixers, automatic blankets, and toasters showed the best sales increases, the latter with a gain of 3,200 units over the previous year's total.

Reflecting the marked activity of electrical appliance sales in the Nashville market, the Nashville Electric Service reports residential usage at 3,817 kilowatt-hours annually as of June 30th last, a gain of 653 kwh per family during the period of appliance sales covered by the above summary. Expenditures by the company in additions and betterments to its prop-

NOW, OFFER YOUR CUSTOMERS MODERNIZATION WITHOUT REDECORATION



Above, an installation of KAYLINE "SUNLITE" Units, illustrating how use of these famous fixtures achieves the effect of modernization without expensive alterations . . . a big selling point for your customers!

LOBBIES
SHOWROOMS
CLUB ROOMS
PUBLIC BUILDINGS
HOTELS
THEATRES
INSTITUTIONS
RECREATION ROOMS

SUPPLY THEM WITH KAYLINE FIXTURES

The KAYLINE "SUNLITE" Unit shown in the installation above features Corning Alba-Lite Panels releasing more light in every direction. "SUNLITE" units are easy to install, and easy to service. The striking design blends with any architecture and units can be used singly or in continuous runs.

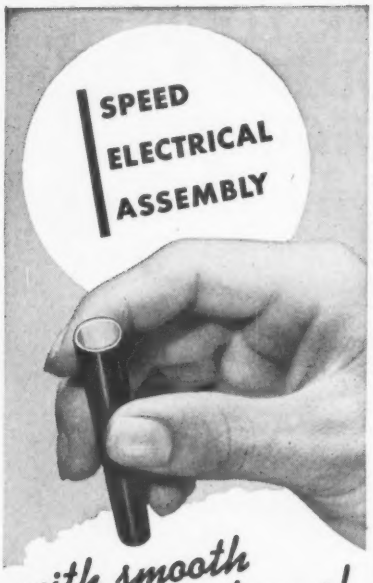
A really complete selection of fluorescent fixtures is available in the "KAYLINE"—residential, commercial and industrial. Check your lighting interest on the coupon below and send it to us today-

For over 55 years
THE
KAYLINE
COMPANY
2480 East 22nd St. Cleveland 15, Ohio

GET KAYLINE CATALOGS . . .
CLIP THE COUPON BELOW TO YOUR LETTERHEAD AND MAIL TODAY.

THE KAYLINE CO., 2480 E. 22nd St., Cleveland 15, Ohio
Please send the KAYLINE Catalogs I have checked.

☐ *KAYLINE Commercial Lighting Fixtures*
☐ *KAYLINE Lighting Fixtures for Low-Cost Homes*
☐ *KAYLINE Troffer Lighting Fixtures*



with smooth inside bore of

DIEFLEX
VARNISHED TUBING PRODUCTS

YOUR product assembly will be quicker and easier if you use top-quality Dieflex products. Every one has smooth inside bore that makes it easy to use. It slips over bent wire, around corners, and into crowded places quickly because wire ends won't catch on the smooth inside surfaces.

The many inherent advantages of Dieflex Tubing Products, including the smooth inside bore, extreme flexibility, thorough impregnation with oleoresinous baking-type insulating varnish, and the many other desirable features found in every piece, are reasons for the widespread use of Dieflex Varnished Tubing Products. Get these advantages for your own product. Dieflex is available with either a cotton or glass fiber base to meet your insulating requirements. Call your nearest representative for details.

INSULATION AND WIRES INCORPORATED

INSULATION AND WIRES IWI SERVICE

3435 Chouteau Avenue
St. Louis 3, Missouri

1111 Live Oak Street
Houston 3, Texas

450 Bishop Street N. W.
Atlanta, Georgia

NEW HOME FOR STEEL CITY SUPPLY—Purchased in late 1947, this new building has been completely remodeled and improved by Steel City and Supply Company, Inc., of Birmingham, exclusive distributor of Crosley products in Alabama and northwest Florida. Executives of the distributing organization are Robert F. Hall, president; J. W. Hamilton, Jr., vice-president; Lee D. Marbury, sales manager; and A. C. Ogle, service manager.

erties to keep apace of this unprecedented demand reached a record sum of $3,654,571.40 during the fiscal year.

New Division Created by American Steel & Wire

CREATION of a new and separate sales division to handle the electrical wire and cable products of American Steel & Wire Co. has been announced by H. M. Francis, vice-president—sales, of this United States Steel Corp. subsidiary.

Establishment of the new division with four regional sales offices throughout the country will permit concentration of sales effort on such items as the paper insulated cable, rubber jacketed cable, galvanized telephone wire, and Amerductor, the transmission cable used for rural electrification lines, Mr. Francis said in making the announcement.

T. F. Peterson, who has headed the section of the general sales staff of the company devoted to electrical products, will serve as manager of sales of the new division. His offices will be in the Union Commerce Building, Cleveland, Ohio. Mr. Peterson started with American Steel & Wire Co. as a cable engineer in the New York sales office, and in 1936, became director of the Electrical Cable Works, at Worcester. In 1941, he came to Cleveland as director of electrical cable engineering and research. He holds numerous patents in the electrical field.

C. H. Eisenhardt, formerly assistant manager of sales in the section, will serve as assistant manager of sales in the new division.

Four new district sales offices under the new organization will be established: C. H. Currier, Boston, to serve the New England district; V. W. Heimberger, Cleveland, to serve the Central district; R. A. Coates, Chicago, to serve the Western district; and C. M. Vaill, New York, to serve the Eastern district.

New Plant Designed For 400,000 Kilowatts

CONSTRUCTION of a new 100,000-kilowatt steam-electric generating plant has been started by the Georgia Power Company on the Chattahoochee River between Newnan and Carrollton, Georgia, according to announcement by C. B. McManus, president.

The plant is designed for ultimate expansion to a capacity of 400,000 kilowatts, 160,000 kilowatts greater than any existing plant of the kind in this area. Plant Atkinson, near Atlanta, is one of the South's largest with a capacity of 240,000 kilowatts. The big generating station will send its output mainly to the Atlanta, Newnan, LaGrange and West Point

areas, although the power will be available to other sections as well through the company's state-wide transmission system. The plant location is about 40 miles from Atlanta.

Cost of the first unit is estimated at $1,500,000 including connecting transmission lines. It is expected to go into service in the fall of 1950. Some preliminary work has already been done at the site, borings having been completed to determine the suitability of the rock foundation in preparation for the start of excavation work. The huge turbo-generator and the boiler have been on order for some time.

Data Available for Users Of Fractional HP Brushes

THE 44-PAGE "Fractional Horsepower Equipment Brush User's Guide" just issued by the Stackpole Carbon Company, St. Marys, Penna., contains much helpful data on selecting and applying brushes for longer life and better performance in a wide variety of small-motor equipment and under different conditions of use.

Particular attention is paid to brush problems and their remedies for universal motors, automotive generators, automotive starters, aviation generators, single phase motors and other types. Of special value is complete information on the choice and method of calculating suitable brush springs on which proper brush performance depends to such a great extent.

In addition to data on the regular Stackpole fractional horsepower motor brush grades, the Guide describes the unique Stackpole silver graphite types. Also included are helpful data on shunts and shunt connections; caps, terminals and hammer plates, and a complete exposition of Stackpole brush grade characteristics. A copy of the catalog will gladly be sent to brush users who request copies on their company stationery.

Beckett Company Changes Name

IN KEEPING with the expanded activities of the company during the past few years, a change in name of The Beckett Electric Co. to the Electrical Supply Corporation was announced by Glen C. Wasson, president.

The company was purchased by Mr. Wasson in 1944. Established by Mr. Thos. G. Beckett some forty years ago, The Beckett Electric Co. is one of the oldest and largest inde-

S&M Better Lite-ing

BACKED BY 40 YEARS LEADERSHIP

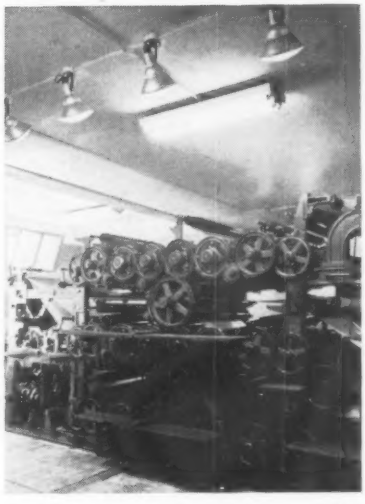
FROM LARGE OUTDOOR LITE-ING JOBS TO INDUSTRIAL LITE-ING INSTALLATIONS

★

S & M LAMP CO. CAN ASSIST YOU WITH ALL YOUR FLOOD LITE-ING PROBLEMS

"RED CAP"

QUALITY FLOOD LITES



Let us assist you in giving your clients jobs that mean years of top performance—both in S & M Lite-ing equipment itself and its important functioning. Ask to have an S & M Better Lite-ing representative call and show how we can work most efficiently with your organization to insure lite-ing satisfaction... at a saving of your time and effort.

Send for the new S & M Flood Lite Catalog

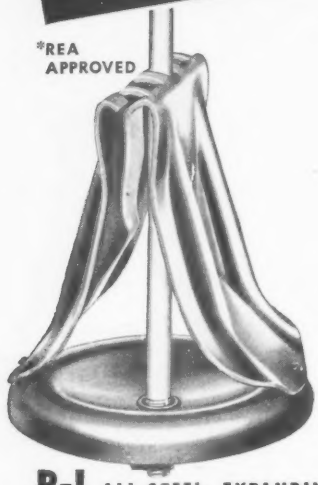
Since 1909 S&M BETTER LITE-ING

S&M LAMP CO.

119 WEST 36th PLACE • LOS ANGELES 54, CALIF.

P-L* EARTH ANCHORS

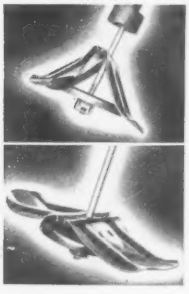
*REA APPROVED



P-L ALL STEEL, EXPANDING TYPE EARTH ANCHORS

Here is the first really efficient, two-piece earth anchor that is of simple, fool-proof, all-steel, heavy-duty construction. P-L Earth Anchors are exceptionally rugged and possess tremendous holding power. P-L Anchors can do a better job and can be installed quicker in all types of soil. Everyone from the engineer to the lineman can appreciate the ease of handling and installation.

EASY TO INSTALL



P-L Anchors come to you as assembled units. Built of two simple pieces of heavy steel plate. A few blows of the tamping bar and the sharp edged blades cut deeply and permanently into solid, undisturbed earth.

FOR LITERATURE WRITE

PIEPER-LILLARD INCORPORATED
ST. LOUIS 1, MO.

pendent wholesalers of electrical equipment and supplies in the Southwest. Occupying a modern six story, fire proof building at the corner of McKinney Ave. and Griffin Sts. in Dallas, the company has salesmen throughout the north Texas and Oklahoma areas. The company wholesales the products of some three hundred manufacturers including lighting equipment, appliances, refrigeration supplies, motor repair material and parts as well as construction materials.

No changes in personnel are contemplated. Mr. P. H. Rawlinson is vice-president, Mr. J. D. Robinson, sales manager and Mr. F. B. Wisinger is secretary-treasurer of the company.

G-E Improvement Brings Lighting Cost Reduction

ELECTRIC LIGHTING costs will be reduced for many industrial and commercial concerns as a result of a "major" fluorescent lamp improvement announced by General Electric's Lamp Department.

Consumers who have been employing 100-watt fluorescent lamps henceforth will use about 14 per cent less electricity to supply the same amount of light, according to G-E illuminating engineers.

The saving will be possible as a result of the development of an 85-watt fluorescent lamp which produces the same high light output, maintains the same long life, and has the same overall dimensions as the 100-watt lamp, engineers said. It will replace the 100-watt size in present lighting installations, they said, also.

The new 85-watt lamps, because of their greater efficiency, are expected by G-E lighting authorities to result in higher levels of illumination in new installations, and to find even wider use in industrial, commercial, and office lighting applications, than did their predecessors.

Hartford Radio Campaign To Tryout in New Orleans

APPROXIMATELY 400 radio dealers in Greater New Orleans will conduct a major radio sales promotion program from October 1 to October 15 using the twin-theme, A Radio in Every Room—A Radio for Everyone, which proved so successful in Hartford, Connecticut, Walter A. Leonhard, president of the Radio Dealers Association of New Orleans, announced.

"After studying the Hartford program in great detail there is no question in our minds but that the Hartford program offers the solution to many of the radio dealer's selling problems and provides a co-ordinated plan for improving his business not only for two weeks but for 52 weeks of the year." Mr. Leonhard, who is general chairman of the campaign in New Orleans will be assisted by A. B. Lindauer as co-chairman. A mass meeting of the 400 local dealers has been planned. Both press and radio have volunteered to support the dealers in this activity by running special news feature stories, spot announcements and guest programs on the air.

This "Radio in Every Room—Radio for Everyone" campaign in New Orleans will probably prove to be the forerunner of a series of similar radio merchandising programs in cities from coast-to-coast. Already eight other cities including Atlanta, Ga.; Worcester, Mass.; Peoria and Springfield,

LINDSAY AND MORGAN GET ADDED SPACE—New warehouse facilities, covering a total of 20,000 square feet, were recently acquired by Lindsay and Morgan Company, Savannah distributing firm. The extra space makes possible a consolidation of the shipping, receiving and service departments.

Ill.; Des Moines, Iowa; Denver, Colorado; Newark, N. J. and Salt Lake City, Utah are studying the Hartford campaign and are giving serious consideration to this program which was developed under the auspices of the Radio Manufacturers Association Advertising Committee.

I. H. Shopoff Appointed Adv. and Sales Manager

AMERICAN WHOLESALERS of Washington, D. C. has announced the appointment of Darwin H. Shopoff as advertising and sales manager. Mr. Shopoff will be responsible for the development of this department.

Mr. Shopoff comes to the American Wholesalers from the Washington Post where he served as retail advertising representative to the radio, television and electrical appliance field.

Memphis Distributor Helps Set Sales Record

A SOLID CARLOAD of General Mills Tru-Heat irons rolled out from Bloomington headed for Orgill Brothers Company of Memphis and established a sales record for both company and distributor in the process.

The record is that the carload, containing 6,000 irons in the line sponsored by Betty Crocker, is the first sale of its size by General Mills to an independent distributor. Other carload sales have been to national accounts.

R. E. Imhoff, executive vice-president of the General Mills Mechanical Division, dropped by for a personal inspection as the carloading got underway. The shipment was delivered in early September.

The sales job was turned in by Jack Edwards, General Mills district sales manager with offices in St. Louis, assisted by Johnny Peoples, the branch representative located at Little Rock, Arkansas. Both are General Mills veterans, having been associated with grocery products sales for several years before joining home appliances.

Manufacturers' Data Available to Readers

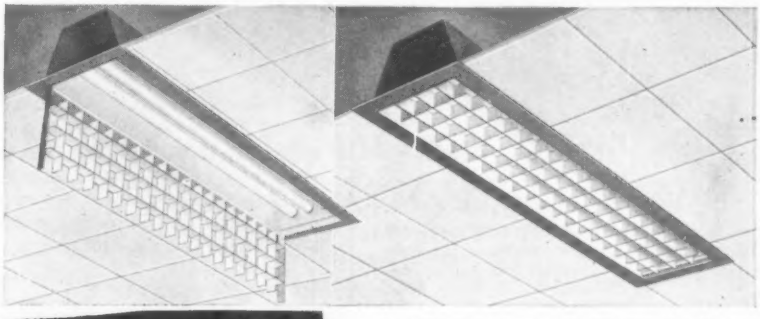
A COMPREHENSIVE guide for service-station managers and electrical contractors covering all phases of service-station lighting has been released by Westinghouse Electric Corp. The new 27-page booklet (B-3913) describes in detail objectives to be at-

PLANNED LIGHTING WITH WILEY RECESSED TROFFERS

Wiley Recessed Troffers in unusual patterns

Wiley stock model Recessed Troffers provide custom-made results both in lighting requirements and flexibility of arrangement to fit any architectural plan *without* custom-made costs.

Wiley Recessed Troffers Combined with "Spots" in continuous runs.



Only Wiley has the
E-Z SERVICER
Pat. #2427084
One-man service . . . No Tools. Raise one side, slide sideways and drop open. Unhook to completely remove.

FEATURES, UNIVERSAL UNIT:
- Adaptable to any position.
- Individual or continuous runs or patterns.
- Open, louvered or glass.
- May be combined with Wiley Spots.
- 2, 3 or 4 lamps.
- Starter or Instant Start. H. P. F.
- Underwriters Approved.

I.B.E.W. label

Other WILEY Fixtures:

NIAGARA FLEUR-O-LIERS: 2, 3, 4 or 6 lamps, louvered or glass bottoms. May be suspended from or mounted flush to ceiling, singly or in continuous runs.

NIAGARA BEAM: 2, 3, or 4 lamps, louvered or glass. Flush to ceiling—Singly or continuous runs.

WILEY SEMINAR: Specially designed 2-lamp fixture for planned schoolroom lighting.

SPOTS: Adustable or fixed lens. May be used individually or combined with Wiley Commercial or Troffer models.

INDUSTRIAL FLUORESCENTS: Complete high quality line, open, louvered or glass bottoms.

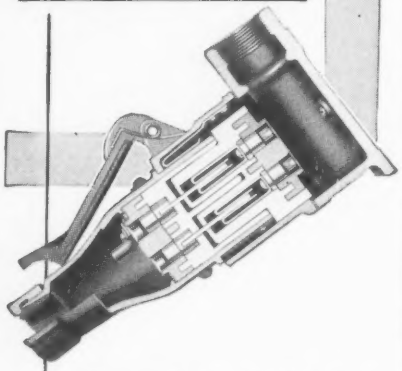
SOUTHERN SALES ENGINEERS:

FRED ARMY, 4209 Parry Avenue, Dallas 10, Texas
L. W. ROBERTS, 111 North 8th Street, Richmond 19, Va.
A. G. MULLER, 923 Guilford Building, Greensboro, N. C.
G. H. ARNOLD, 2378 Beecher Road, S. W., Atlanta, Ga.
A. J. WEILBAECHER, 823 Perdido Street, New Orleans 12, La.

R. & W. WILEY, INC.
Dearborn at Bridge Street — Buffalo 7, N. Y.

QUELARC

The Circuit Breaking Plugs and Receptacles . . . Ratings Up to 200 AMPERES



The exclusive QuelArc construction provides exceptional protection to contacts, for safe use as current rupturing devices. Unique partitioned insulation provides extra long distance between contacts and between contacts and ground. Insulating chambers completely enclose all contacts and form an arc-trapping space. Galvanized cast metal housings, bakelite insulation and individually renewable contacts insure long service life.

QuelArc plugs and receptacles are available in a complete range of styles, 2, 3 and 4 pole types—grounded through shell or extra pole. Housings with threaded cap, plain cap or hinged spring door. Ratings 20, 30, 60, 100 and 200 amperes, 250 volts DC, 600 volts AC. Consult your Pylet Catalog 1100, Bul. 1140-2 for complete listings.

CONDUIT FITTINGS • FLOODLIGHTS

SINCE 1897

THE PYLE-NATIONAL COMPANY

1354 N. Kostner Ave., Chicago 51, Ill.

tained and equipment available for lighting service - station exteriors, showrooms, offices, grease and wash rooms, and repair shops.

The special problems of all-glass stations and canopy-type stations are enumerated and suggestions given for their effective lighting.

Copies of the booklet may be secured from the Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

* * *

A new bulletin covering five different lines of lamps for heavy duty industrial service has been issued by Radiant Lamp Corp., 300 Jelliff Ave., Newark 8, New Jersey. Illustrated and described in the booklet are the Hi-Flood R40 floodlights for indoor and outdoor use, Hi-Heat R40 infrared lamps for industrial drying service, spatterproof lamps to withstand hot spatter and rough handling in welding, weatherproof lamps for outdoor illumination of large areas, and standard lamps for general lighting service.

Illustrations showing various applications, and complete specifications and prices are furnished for each type of lamp. A copy of Bulletin 68 will be mailed upon request of the manufacturer.

* * *

Pittsburgh Reflector Company announces the publication of its new 52-page catalog which presents the complete line of fluorescent luminaires, troffers, strips, accessories, etc., together with companion incandescent equipment which may be used in conjunction with fluorescent lighting for planned lighting installations.

The catalog gives complete descriptions, specifications, engineering data, uses and other pertinent information on this firm's lighting equipment. Illumination guides accompany each unit for estimating the foot-candle requirements. Complete installation details are included for every unit as are suggested applications and coefficient of utilization tables. Recommended levels of illumination are given for various types of installations and cross indexing simplifies the selection of the desired equipment.

Copies of this bulletin (No. 48-K) may be obtained from the Pittsburgh Reflector Co., Oliver Building, Pittsburgh 22, Pa.

* * *

A comprehensive bulletin on "Sky-Glo," the new louvered ceiling lighting system, has just been announced by Benjamin Electric Mfg. Company, answering scores of important questions being asked about this new louverall ceiling. Bound in Vinylite plastic, the 28-page booklet contains a wealth of information, including many illustrations, photographs, architectural drawings, engineering charts and specification charts. Free copies of the "Sky-Glo" bulletin may be obtained by writing to Benjamin Mfg. Company, Dept. N. R., Des Plaines, Ill.

* * *

A 40-page book, issued by Spero Electric Corporation, now takes the guess-work out of planned lighting installations. It is designed for the use of architects, lighting engineers, electrical contractors, and anyone else interesting in lighting. It contains all the information required for successful application of fluorescent lighting —including candlepower distribution, coefficient of utilization and foot-candle level charts, dimensions, specifications, etc. It is profusely illustrated with photographs of the many types of Spero fluorescent luminaires and other lighting products, installation photographs, dimensional sketches, mounting diagrams, etc. It also gives detailed catalog descriptions and shipping data on all Spero's five lines of electrical products, comprising over 250 items. Copies are available on request by writing The Spero Electric Corporation, 18222 Lanken Ave., Cleveland 19, Ohio.

New Atlanta Building For U. S. Rubber Co.

CONSTRUCTION of a new building in Atlanta for United States Rubber company, which will house both offices and warehouse, is well underway and is expected to be completed and ready for occupancy about the middle of November.

Located at Lee and Donnelly Streets, on one of the busiest highways leading into and out of the city, the new building will be one of the most modern and well-equipped of its kind anywhere, according to I. M. Moulson, branch operating manager. The building will be one story high, with approximately 100,000 square feet of floor space. It will be one of the major stocking points in the country for the company's vast line of tires, mechanical goods, footwear and other items. All offices will be air-conditioned.

Growth of the company's business in the Atlanta area necessitated the move from the branch's present location at 204 Walker Street, SW, to its projected new quarters, Mr. Moulson said, and can be regarded as another indication of the increased development of industry in the South.

The Atlanta branch is an important cog in the company's over-all operation, he stated, pointing out that it handles business in six major southern states; Alabama, Florida, Georgia, North Carolina, South Carolina and Tennessee.

The branch will employ some 140 persons, including office workers and warehouse personnel. Also, its facilities for materials handling and stocking of merchandise will be unexcelled. Facing on the L & N railroad siding, its loading platform will have a capacity for handling five freight cars and six large interstate "land cruiser" type trucks at one time.

Expansion of the Atlanta branch is part of the company's program to extend its operations throughout the South, Mr. Moulson said.

Graybar Is Host at Dealer's Meeting

In TAMPA recently Graybar Electric Co., 416 Ellamae Ave., was host to 75 Universal appliance dealers at a noon luncheon meeting at the Floridan Hotel, in conjunction with an all-day meeting there, Ray Boyne, local Graybar sales manager, announced.

Sales instruction and educational demonstrations were offered the dealers. C. E. Buchanan, southeastern sales manager for the concern, of Atlanta, gave demonstrations of ranges and sweepers.

DATES AHEAD

National

National Electronics Conference, Edgewater Beach Hotel, Chicago Ill., Nov. 4-6, 1948.

National Farm Electrification Conference, Congress Hotel, Chicago, Ill., Nov. 17-19, 1948.

47th Annual meeting of National Electrical Contractors Association, Roney Plaza Hotel, Miami, Fla., Nov. 30 to Dec. 3, 1948.

Winter General Meeting, American Institute of Electrical Engineers, Pennsylvania Hotel, New York, N. Y., Jan. 31 to Feb. 4, 1949.

Southern

Southern District, American Institute of Electrical Engineers, Tutwiler Hotel, Birmingham, Alabama, Nov. 3-5, 1948.

Annual Sales Conference, Southeastern Electric Exchange, Atlanta Biltmore Hotel, Atlanta, Ga. Nov. 10-12, 1948.

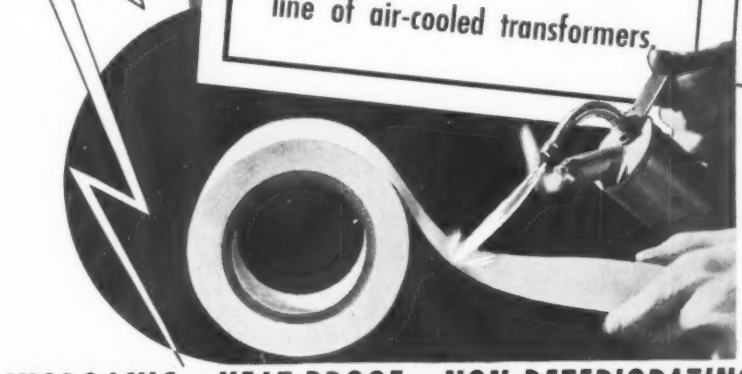
Engineering and Operations Section, Southeastern Electric Exchange, General Oglethorpe Hotel, Savannah, Ga., March 24-25, 1949.

Annual Conference, Southeastern Electric Exchange, Boca Raton Club Boca Raton, Fla., April 13-15, 1949.

Southwestern District, American Institute of Electrical Engineers, Dallas, Texas, April 20-22, 1949.

NEW! A Good Transformer MADE BETTER!

MTC uses the new JOHNS-MANVILLE *Quinterra* insulation throughout its entire line of air-cooled transformers.



INORGANIC • HEAT-PROOF • NON-DETERIORATING ELECTRICAL INSULATION

AIR-COOLED TRANSFORMERS
1 to 1,000 KVA up to 15,000 Volts to meet Individual Requirements
- DISTRIBUTION
- GENERAL PURPOSE
- PHASE CHANGING
- ELECTRIC FURNACE
- RECTIFIER
- WELDING
- MOTOR STARTING

Insulation determines the working life of an air-cooled transformer. Marcus Transformers have always been known for their use of superior Class B and C heat-proof insulation. In this phase of construction, MTC has pioneered many noteworthy firsts. AGAIN, MTC is pioneering in the use of *quinterra* throughout its entire line of air-cooled transformers. That's why when air-cooled transformers are specified or needed, the reputation of Marcus stands pre-eminent in its field. That's why we invite your inquiry with confidence, knowing that once you have utilized a Marcus air-cooled Transformer, you will specify no other.

GOOD DELIVERIES • FIRM PRICES
NO ESCALATOR CLAUSES

MTC THE MARK OF QUALITY

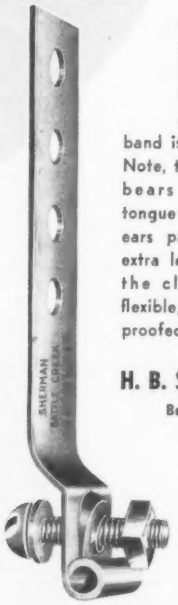
Sales Representatives:
W. E. HOLIMAN COMPANY
Houston 1, Texas
•
L. MORRIS LANDERS COMPANY
Atlanta 3, Georgia

MARCUS TRANSFORMER CO. INC.
38 MONTGOMERY STREET
HILLSIDE 5, NEW JERSEY

PIONEERS IN THE FIELD OF AIR-COOLED TRANSFORMERS

Sherman
GROUND CLAMPS

Partially Formed
for EASY
INSTALLATION



It's a quick and easy job to wrap one of these Copper Ground Clamps around the pipe, because the band is partially formed! Note, too, how the rolled end bears against opposite tongue of clamp, holding the ears parallel and providing extra leverage for drawing the clamp tight. Made of flexible, pure copper. Rust-proofed bolt.

H. B. SHERMAN Mfg. Co.
Battle Creek, Mich.

Sherman
ELECTRICAL CONNECTORS

Names in the News

The Edwin F. Guth Company recenly announced the appointment of **W. L. Clinton,** of Houston, Texas as their representative in the southern Texas territory.

Mr. Clinton has been actively engaged in the electrical industry for the past 20 years. His experience includes work in electrical contracting, electrical wholesaling and as a lighting engineer with a public utility.

* * *

George Maised has been named regional sales manager for Admiral radios, radio-phonographs, television sets, electric ranges and refrigerators, with headquarters in Dallas. The territory includes Oklahoma City and the states of Louisiana and Texas.

* * *

Theodore Berk has been elected a vice-president and director of Lightolier, Inc., climaxing a rise from his first job as stock boy in the Ligholier company 26 years ago. Mr. Berk has made his way up through a dozen positions en route to his present post which includes the operating responsibility of being merchandise manager for the Lighting Fixture Division. Until this promotion Mr. Berk was for nine years assistant merchandise manager and metropolitan sales manager of Lightolier's Lighting Fixture Division.

A member of the Illuminating Engineering Society, Mr. Berk is well-known in trade circles. As former manager of the New York Decorator Galleries, Lightolier's consumer research arm, and also as field supervisor, he acquired a facility for looking at lighting from both the user's and the distributor's points of view.

* * *

President **Richard L. White** of Landers, Frary & Clark has announced the appointment of **R. N. Campbell** of Jackson, Michigan as the new vice-president in charge of manufacturing operations. He succeeds **L. A. Brown** who recently resigned.

At the same time Mr. White also announced the promotion of **Charles Cook** to be manager of the main plant of the company on Center Street and assistant to Mr. Campbell. In his new post, Mr. Cook will have charge of manufacturing activities at the Center Street and Plainville plants of the company.

Mr. Campbell has had more than 22 years of manufacturing experience, most of them spent with the Carrier Corporation of Syracuse, New York. He is a mechanical engineer and received his education at Pennsylvania State College.

Mr. Cook began working for Landers, Frary & Clark 38 years ago as a machine operator. Not long afterward, he was promoted to be a fore-

On a recent visit to Atlanta, Franklin McDermott, left, sales manager of Wagner Malleable Products Company, Chicago, Ill., held a sales meeting with his southeastern sales representative, Edgar E. Dawes, head of the Edgar E. Dawes Company.

man and advanced steadily in the company's employ, holding many posts of responsibility. He served in the Navy during the first World War.

* * *

L. A. **Bonneville,** sales manager of the Unit Air Conditioner Division, announces the appointment of **Joel A. Weir** as regional manager for the southeastern territory for Fedders Room Air Conditioners with head-

Joel Weir

quarters at No. 25 Honour Circle, NW, Atlanta, Georgia.

Mr. Weir was formerly sales manager for the Heating Division of the Charles S. Martin Distributing Company of Georgia, and has had extensive experience in the major electrical appliance contracting business.

His territory will cover the southeastern states from Tennessee and North Carolina to Florida.

* * *

Ed **Pollard,** who has been associated with the electrical manufacturers agency business for some time in the states of Georgia and Alabama, has recently become associated with the firm of W. J. Milner & Com-

Ed Pollard

pany, manufacturers' representative of Atlanta. Mr. Pollard, representing only the lighting lines handled by Milner, will travel throughout Alabama, Florida, Georgia, South Carolina and Tennessee. The lighting lines represented include Harvstone, Kurtzon, Perfeclite, Quadrangle, and Monogram.

* * *

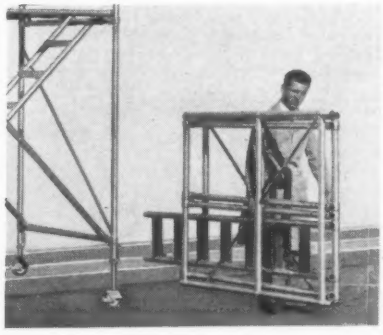
Dawson J. Burns of the Ward Leonard Electric Co., Mount Vernon, N. Y., who resigned the office of president of the company at a meeting of the Board of Directors held September 28, 1948, has been elected chairman of the Executive Committee. Mr. Burns has been a member of the Board of Directors since 1903, serving the company as vice-president from 1908 to 1944, at which time he was elected president.

Arthur A. Berard, executive vice-president and general manager of the company since 1944, has been elected president and general manager. Mr. Berard, who joined the company in 1920, has been a member of the Board of Directors since 1927 and has served as factory manager and general sales manager.

NEW!
ALUMINUM-ALLOY
"UP-RIGHT"
SCAFFOLDS
MOBILE 45' UNIT TAKES ONLY 15 MINUTES TO ERECT

Rolled easily from position to position. Bridges obstacles with ease. A 7 foot, single section unit requires one man only a minute to erect; a 45 foot multiple unit only 15 minutes. Stronger than structural steel yet one-third the weight. Safety-tread stairway completely within the structure. No wrenches, wing nuts, bolts, loose parts.

Each Section Folds Flat . . .



Electrical work by Interstate Electrical Co., in Trinity Church, Springfield, Mass.

Write for Descriptive Circular

Up-Right Scaffolds
ROOM 117 • 1013 PARDEE ST.
BERKELEY, CALIFORNIA
Offices in All Principal Cities

SILENT SALESMEN

TO HELP YOU SELL

General Electric— Heating Pads

SUGGESTED dealer margins have been increased on the new line of General Electric heating pads, D. C. Spooner, Jr., manager of the company's automatic blanket and sunlamp division, has announced.

The line has been redesigned to increase its appeal to women. It will feature covers in attractive pastel shades with harmonizing colored cords. Plug and switches are finished in soft ivory tones.

A new easy-to-handle package with colorful zodiac motif stressing the year round usefulness of heating pads will contain the new line.

To merchandise the new package, a lazy-Susan type of revolving metal display will be offered without charge to retailers with an initial order of a dozen pads.

The three-heat, wetproof pad may be used with wet applications in cases where wet heat is recommended.

Mr. Spooner said that the new heating pad line does not immediately replace the current line of pads, which are packaged in cylindrical knitting box cartons.

Lewyt— Vacuum Cleaner

A TRANSPARENT plastic dust bowl that dramatically illustrates the action of the Lewyt vacuum cleaner has been made available to dealers for display and demonstration purposes.

The plastic bowl is the same as the regular metal dust bowl. It carries identical side latches, and suction fit-

let connection, and can be joined to the motor unit in exactly the same manner as the regular bowl.

Colored confetti is used to show how the dirt and dust is moved when the Lewyt operates.

Westinghouse— Vacuum Cleaners

FOR DISPLAY of its vacuum cleaners, Westinghouse Electric Corporation has made available to its dealers, a demonstration display which provides space for one upright cleaner and attachments, one tank cleaner and attachments, and one convertible Hand-Vac unit.

The display is made of reinforced Masonite "Presdwood" and is finished in pastel green to blend with other store colors. It is 64 inches long, 50 inches high, and 18 inches deep. Across the back of the display are six illustrations pointing out the many cleaning jobs the units will perform.

The display includes a two-section demonstration rug. One section of the rug is made of short pile Axminister and the other is made of deep

BELL AUTOMATIC ELECTRIC
HOT WATER HEATER
New Features! New Sales Power!

- Convenient Table Top — 30 Gallon Capacity
- No Visible Plumbing or Electrical Connections
- Heavy Galvanized Tank
- One Year Guarantee

Bell quality is built upon the solid foundation of good design and precision manufacturing methods. To insure customer satisfaction and long years of service, only the best materials money can buy are used. Advanced engineering principles and good workmanship make for trouble free service.

Write For Complete Information

NOW Mfg. By:

ADACAR Manufacturing Co.

Napier Field, Dothan, Ala.
Formerly Mfg. By
Bell Electric Products Company

pi velvet to help the salesman demonstrate how the nozzle of the upright model adjusts itself automatically to all thicknesses of carpet. A kit of sand, kapok, and filter papers is also included in the display.

Cory—
Knife Sharpener

A NEW merchandising package designed to aid the trade in the introduction and promotion of the new Cory electric knife sharpener is currently being distributed by Cory Corporation, 221 North LaSalle St., Chicago 1, Ill. A self-demonstrating counter display unit is included with three of the new Cory electric knife sharpeners as a "going into business" kit. This display and stock of three units enables the jobber salesman to put the dealer in the knife sharpener business with a complete self-selling, self-demonstrating knife sharpener sales department in less than two square feet of counter space.

The display unit itself contains one knife sharpener and includes a knife

channed to the display and a dulling block. Copy on the display contains instructions on how to use the product and invites store traffic to "go ahead — try it yourself." On the counter, with the sharpener plugged into an electric outlet, any shopper passing the display can try the unit.

At any time the dealer may discontinue his promotion of the new Cory sharpener by merely selling the unit, thereby liquidating his entire investment.

Westinghouse—
Lamp Bulbs

A FLEET OF 12 Salesmobiles has been placed in service by the Westinghouse Lamp Division of Bloomfield, N. J., to assist its retailers boost lamp bulb sales throughout the country. The Salesmobiles are standard sedan delivery trucks with panel bodies painted in orange and blue. They will be manned by sales promotion men carrying display cards, metal and wood-merchandisers, and promotional material.

According to William J. Massey, Westinghouse manager of general lamp sales, the company's experience has proved that lamp bulbs have to be shown in order to be sold in quantity. Salesmobile men will help the

U. S. Pat. 2,105,038.

Gives You BETTER MOTOR PERFORMANCE!

YES, the transverse graphite insert — exclusive with Helwig-Speer TRANSERT Brushes — reduces ring wear of your rotating machinery to a minimum.

That longer life is accomplished because uniform friction characteristics overcome rapid wear even under low humidity conditions. And that's when motors and generators equipped with ordinary brushes give the most trouble.

What's more, TRANSERT BRUSHES give you even current distribution, better ring lubrication. The graphite inserts can't fall out — they're wedge- and force-fitted.

For complete information on ordering brushes, write today for Catalog 25.

★ CALL YOUR NEAREST OFFICE

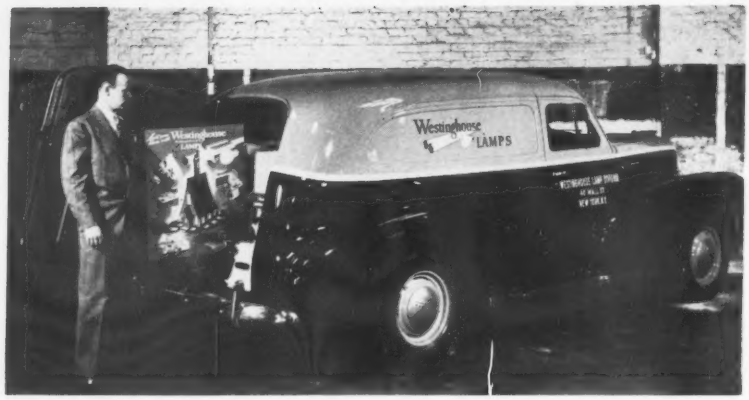
For convenient, economical service of electric motors, use Helwig Brush Kits. There's a kit for every need — household appliances, tools, motors. And, if you run low on a popular brush, you don't have to order a complete kit. Just ask for the brush you need from our nearest office. Send for Bulletin 65.

SOUTHERN OFFICES

Atlanta ..... 316 Walton Bldg.; La. 7202
Oklahoma City 323 NW 2nd St.; Tel.: 2-6881
Houston ..... 1101 Chenevert; Ch. 4-6549
St. Louis ... 1913 Washington Ave.; Ch. 6510
El Paso ..... 708 N. Piedras St.; Main 7845

HELWIG SPEER

HELWIG CO., CARBON PRODUCTS
Makers of Multiflex and Transert Brushes



One of a group of twelve Salesmobiles put into action by the Westinghouse Lamp Division, of Bloomfield, N. J., to help promote the sale of lamp bulbs.

retailer select the best place to spot a merchandiser, fill it with lamp bulbs selected from the retailer's stock, and help with a window display if it is desired.

Two Salesmobiles each are in service in the Middle Atlantic District; the Eastern District; the Southeastern District; and the Pacific Coast Dstrict. One is in service in each of the four other districts.

Lightolier— Mailing Pieces

MOST RECENT effort in Lightolier's dealer help campaign is a series of mailing pieces sent each month to approximately 26,000 contractor-dealers. These mailings feature important groups of fixtures in full color, with suggestions for how to increase sales; for example, "selling sentences" on the merchandise, advice from other dealers, display ideas, etc.

The current mailing promotes the Pacemaker series of fixtures, a group of over-scale, close-to-the-ceiling designs in interesting glass textures. According to dealer testimonials included in the broadside, these are being well-received because of their smart styling and saleability for every room in the home.

Apex— Vacuum Cleaners

A COMPLETE, self-supporting home cleaner department, the Apex Cleaner Sales Center, has been introduced by the Apex Electrical Manufacturing Co., Cleveland.

Adaptable to the sales plans of stores of all sizes and types, the cleaner sales center was tested thoroughly in a number of retail stores, where it proved highly successful in multiplying cleaner sales.

This new Apex sales aid is 50 inches high, 60 inches wide and 24 inches deep and requires only 10 square feet of floor space. A permanent, streamlined and ultra-modern fixture, it is of solid-stock construction with birch plywood panels.

The top and first steps are covered with harmonizing carpeting. The top carpet is bound on three sides and secured to the table with large snap

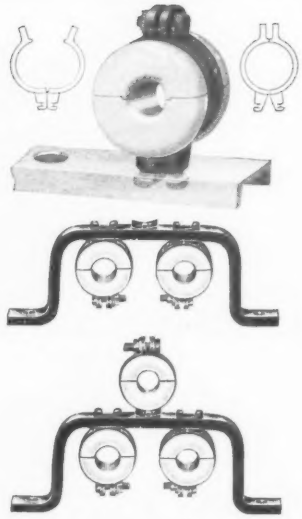
fasteners, permitting it to be folded back for bare floor or waxing demonstrations. The middle step is covered with a blending linoleum.

Three smaller shelves permit display or cleaning tools, and ample storage space for sales literature and materials is provided on the demonstrator's side of the table.

The table eliminates the nuisance of electrical cords around the floor by providing a double outlet.

"EFFICIENCY" DEVICES FOR CONDUIT and CABLE SUSPENSION

***Install cable* quickly, easily and safely with "Efficiency" NESTED Conductor Racks**



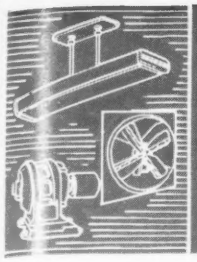
Designed to carry conductors equidistant from center to center . . . Efficiency patented racks feature porcelain bushings and require but one bolt to support bushing and clamp it to the steel frame. Clamps are separate, allowing independent installation of each cable line. Furnished for your requirements for cable from 5/16" to 2-3/8" diameter.

Write today for Catalog 38-A!

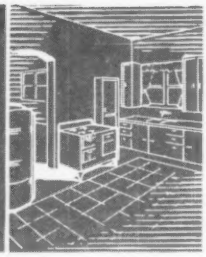
Efficiency ELECTRIC AND MANUFACTURING CO.

MANUFACTURERS OF EFFICIENCY ELECTRICAL DEVICES FOR CONDUIT, WIRE AND CABLE SUSPENSION

EAST PALESTINE, OHIO



ELECTRICAL PRODUCT PARADE



1113—Building Wire

Manufactured by Triangle Conduit and Cable Co., New Brunswick, N. J.

A NEW and improved type of rubber covered braided building wire, which will be known as "Glazon" building wire, comes as the result of long research and exhaustive laboratory and field testing under all condition of use and service.

"Glazon" building wire is covered with a sheath woven of inert, inorganic fibres of high dielectric strength, finer than a hair. These fibres—and the finished sheath—are flexible, much stronger than cotton or rayon, cannot burn, are unaffected by moisture or temperature changes, cannot rot, are immune to all ordinary acids and alkalis and repellent to fungus and rodents.

"Glazon building wire is also smaller in diameter and lighter in weight than conventional building wires. These factors, plus its smooth, slick finish have reduced fishability problems to a minimum.

Triangle is now manufacturing "Glazon" building wire in No. 14 and No. 12 B. & S. Larger sizes will be announced in the near future.

* * *

1101—Refrigerator

Manufactured by Crosley Division, Avco Mfg. Corp., Cincinnati 25, Ohio

THE NEW Crosley Shelvador, known as Model S-79, features seven cubic feet of food storage in a compact cabinet occupying the floor space of a conventional four cu. ft. model in the price range of a six cubic foot model.

Included as standard equipment on the new model is the exclusive Shelvador, which provides twice as much front row food storage space. Another outstanding feature is the oversized frozen food compartment, adequate for 25 pounds of frozen foods.

Other features include a clear polystyrene chill tray for meats; a one piece "breaker" strip of easy to clean plastic, installed without screws or clips; a newly styled temperature control dial located at eye level; and a completely new Crosley Electrosaver unit requiring greatly reduced space. Basic features of construction and design are the same as other new Shelvador models.

* * *

1112—Open Link Cutout

Manufactured by A. B. Chance Co., Utilities Division. 210 Allen St., Centralia, Mo.

THIS NEW open link cutout is built to take rough handling and hard usage—sturdy bronze fittings are used throughout.

The terminal separation spring of the cutout is covered by a protective housing to prevent ice and sleet from interfering with its operation.

Short arcing time, and rapid opening of the circuit are assured by the terminal spring load exerted on the fuse. This spring also absorbs the shock of over-travel, preventing damage to the insulator. The spring is so located that it cannot be overstretched and damaged in handling the cutout. It is out of the current carrying path and its tension cannot be affected by heavy current surges.

Pressure type conductor terminals are shaped to make four point line contact with any size jumper used. Nuts are secured with lock washers.

Slots on both sides of each arm

All YOU WANT TO KNOW

in this NEW 108 page CATALOG of R&S

ELECTRICAL PRODUCTS for HAZARDOUS LOCATIONS

You'll find this catalog invaluable as a time saving, quick-reference medium for your present or future explosion-proof product requirements. A copy will be mailed to you gladly WHEN REQUESTED ON YOUR BUSINESS LETTERHEAD. Ask for Catalog H47.

66

SINCE 1902

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

afford easy fusing of the Chance EM from either side. The resilient mounted bronze fittings protect the porcelain insulators and reduce radio interference. The mounting bracket is cushioned by a soft metal band.

* * *

1114—Fluorescent Fixture

Manufactured by Gibson Mfg. Co., Atlanta, Ga.

EASE OF installation, simplicity of design and striking functional beauty are featured in this new Gibson fluorescent lighting fixture. Two or

four light units are incorporated in the same fixture, thus allowing varying light requirement without the loss of uniform appearance.

The new Gibson 6200-6400 louvered light fixture combines the Gibson No. 900 louver assembly with the Gibson No. 2400 two-light fixture or the Gibson No. 4400 four-light fixture, into one lighting unit. Present installations and inventories of 2400's and 4400's may be readily converted to the new fixture.

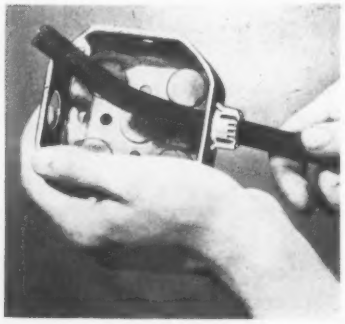
The new Gibson product is equipped with full depth louvers and translucent side panels of polystyrene. End plates are stamped with an attractive decorative design and the entire fixture is finished in natural satin aluminum with "hi-baked" white enamel louvers.

* * *

1102—Cable Connector

Allied Electrical Mfg. Corp., 1 N. LaSalle St., Chicago 2, Ill.

THIS NEW non-metallic sheathed cable connector for electrical outlet boxes, called the Paige No. 52, is made of high grade spring steel and plated against corrosion. It is in-



stalled by pressing firmly with the thumb or tapping lightly from the inside of the knock-out until the connector snaps into position against the outlet box.

The non-metallic cable is then pushed through the connector to the desired length, where it is held in position without screws or locknuts. The complete assembly operation is said to require only seven seconds. Should removal of the connector be necessary, all that is required is to press it together with pliers and push it through the knock-out.

In addition to the fact that a shallow outlet box can be used, the Paige connector permits more room for the electrician's hands in making the connection. There are no screws to be bothered with; the electrician can install this connector without removing his gloves, a distinct cold weather feature. Lastly, the Paige No. 52 is recommended for the new composition, plastic and rubber insulated cable employed by the REA. Manufacturers have reported the Paige No. 52 Connector ideal for strain relief, saving greatly in labor cost.

* * *

1103—Vacuum Cleaner

Manufactured by Landers, Frary & Clark, New Britain, Conn.

A NEW Universal brush type vacuum cleaner, complete with an automatic rug adjusting nozzle, features all-metal construction motor hood of one piece drawn steel fitted into die cast aluminum which supports motor, brush, wheels and handle . . . all in precision alignment.

The motor driven brush is easily adjustable for bristle wear; and a rubber pistol grip handle has finger-tip control switch. A no-mark rubber bumper protects furniture on three sides. The Lite-All headlight lights up dark corners and closets, and three positioned "Touch-Toe" handle control makes cleaning under furniture an easy job.

Ten special matching attachments for cleaning are available for complete all through the house cleaning.

* * *

1104—Coffee Maker

Manufactured by Westinghouse Electric Corp., Electric Appliance Div., Mansfield, Ohio

THIS NEW, all metal, eight-cup capacity vacuum-type maker brews coffee and then automatically keeps it at proper serving temperature. Heat for the coffee maker is provided by two elements, one of 850 watts and the other 150 watts, built into the base of the model. When the starter button is pushed in, both elements are on, giving 1,000 watts for fast heating. When water rises to the upper bowl, all current is automatically cut off. The 150 watt element comes on again when coffee returns to the lower bowl and maintains it at proper serving temperature as long as the cord is plugged in.

Coffee can also be reheated in the lower bowl of the new Westinghouse coffee maker without any danger of its boiling over because the thermostat automatically cuts off the current when water is brought to a boil in the lower bowl, even though the upper bowl is not in place on the coffee maker.

* * *

1105—Starting Switches

Manufactured by General Electric Co., Schenectady 5, N. Y.

THESE NEW manual starting switches are furnished in five different types: with general-purpose enclosure; without enclosure; a combination unit and selector switch; with cast iron enclosure for wet locations, and a similar type for dusty or hazardous locations. The switches are desirable for use with fractional-hp motors driving blowers, pumps, ventilating systems, small machine tools, and a wide variety of similar applications.

An important feature of all five

types is a molded base of moisture-resisting insulating material which mounts and encloses the mechanism and contacts. This particular construction serves not only to protect the operating parts from dust and physical contact, but to direct the heat concentration to the study bimetallic tripping device, thus assuring that the action of the overload is quick and positive. Another feature is the action of the switch handle, which moves to the OFF position on overload, thus giving positive indication that the power is shut off. The wheel-type movable contact

cleans as it rolls against the stationary contacts, and, in addition, recedes into a recess in the base, thus effectively snuffing the arc.

* * *

1106—Home Freezer

Manufactured by International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.

NEWEST addition to the International Harvester refrigeration line is a heavy-duty home freezer, Model 15 FC — a big chest-type freezer with 15.8-cubic-foot capacity that stores up to 553 pounds of frozen food. Lighted interior and an alarm to warn of temperature rise are new features.

Attractive feature of the new model is the large "Freeze-Area" that occupies more than 4 square feet at the bottom of the cabinet interior to provide oversize freezing capacity. Over-all dimensions are 37¼ inches high; 73½ inches wide; and 29 inches deep (excluding hardware).

Other features include: handsome, streamlined styling with Dulux enamel finish over Bonderite; all-steel welded construction; Vac-U-Seal hermetically-sealed insulation; Frost-Lok breaker strip, free of exposed fastenings; automatic temperature control; spring-counterbalanced hinges to hold lid open and provide finger-tip control. The unit is Harvester's famous hermetically-sealed "Tight-Wad" with with a 5-year protection plan.

* * *

1107—Load Centers

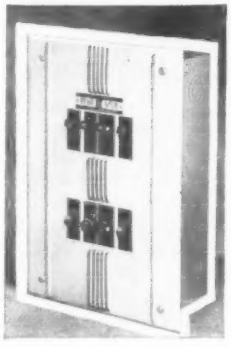
Manufactured by Westinghouse Electric Corp., P. O. Box 868, Pittsburgh, Pa.

A NEW LINE of Quicklag load centers in basic circuit enclosures of 2, 4, or 8 is available. These make possible completely automatic protection for home wiring circuits.

The outstanding feature of the load center is the Quicklag circuit breaker. When it is used there are no fuses to replace; circuit protection cannot be changed; breaker cannot be held closed against shorted or overloaded circuits; arcs are snuffed out by the De-Ion principle; its thermal magnetic action protects against unnecessary tripping on harmless and momentary overload, its time delay (thermal) protection on sustained overloads and instantaneous (magnetic) protection on short circuit faults opens the circuit when in danger.

Installation is simplified by a removable breaker assembly and by the self-alignment of this assembly with the cover. Wires can be pulled in easily with the breaker assembly removed, and connections completed with the breakers in place. The self-alignment feature eliminates the need for tedious adjustment of the breakers in the box.

The load center is designed to accommodate any of the following am-



pere breaker ratings—10; 15; 20; 30; 40; and 50 ampere. Furthermore, they can be installed with fewer active circuits than the total provided for, i.e., 5 breakers in the 8 basic circuit enclosure leaving 3 spare circuit positions. They are designed for 2-wire SN 125 V a-c or 3-wire SN 125/250 V a-c.

* * *

1108—Hydraulic Pipe Bender

Manufactured by Electric Cord Co., 30 Church St., New York 7, N. Y.

THIS NEW lightweight, portable tool forms smooth, uniform pipe bending operations right on the job. Weight has been kept down to a minimum without loss of strength. The combined weight of the jack and frame is only 83 pounds.

Removable hydraulic jack simplifies the service problem and can be used for many other useful purposes. Open jaw construction speeds up production. The 30-inch steel frame is electrically welded and heavily reinforced. Comes complete with ¾, 1, 1¼, 2, and 2½ inch dies. Catalogue sheet available.

* * *

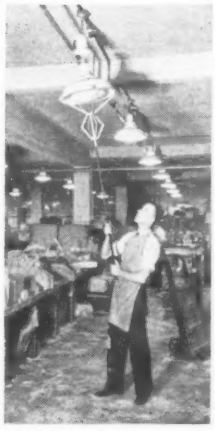
1109—Electric Heater

Manufactured by Electromode Corp., 45 Crouch St., Rochester 3, N. Y.

THIS fan-circulating electric heater, finished in brilliant chrome, and es-

More Efficient Lighting *with* **ABolite**

DUO-MOVE SYSTEM OF MAINTENANCE



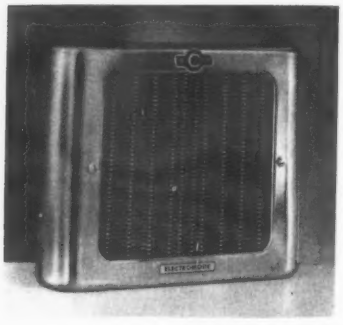
QUICK REPLACEMENT — EASY TO CLEAN — SAVES TIME & LABOR

ABolite DUO-MOVE type reflectors consist of a hood with separable socket which remains permanently attached to the conduit. The lower member of socket is attached to metal collar at top of reflector neck. This permits reflector and lamp to be taken down as a unit. With the Duo-Move Changer, maintenance is so easy and quickly accomplished you can always have clean reflectors and bright, efficient lighting. DUO-MOVE and separable socket type reflectors are available in RLM standard dome, shallow dome, deep bowl and mercury vapor types. ABolite Reflectors are sold exclusively through electrical wholesalers.

Light right with ABolite REFLECTORS PORCELAIN ON STEEL

THE JONES METAL PRODUCTS CO., West Lafayette, Ohio

pecially designed for heating bathrooms and other small areas, is the newest addition to a complete line of



heaters manufactured by Electromode.

Known as the Bilt-in-Wall small-room heater, the new chrome model is easily installed in practically any type of wall construction, and connects to the regular 110-volt a-c house circuit. It is rated at 1320 watts.

A quiet built-in fan distributes 80 cubic feet of heated air per minute, warming any small room quickly and efficiently.

Heat is generated by a patented cast-aluminum heating element which has no exposed wires or glowing coils. This element gives complete and permanent safety from fire, shock or burn. In addition, the heater is equipped with a thermal safety switch that prevents overheating. Heat can be controlled by a thermostat, if desired.

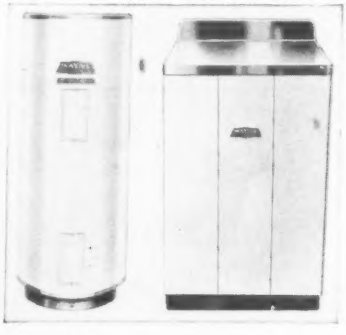
* * *

1110—Water Heaters

Manufactured by Wayne Home Equipment Co., Fort Wayne, Indiana

ELECTRIC WATER heaters have been added to Wayne Home Equipment Company's line. Both conventional round and table-top models are included, with single and double elements. The 30, 40, 52 and 66-gallon round, and 30-gallon table-top sizes are equipped with contact thermostats, 3¼-inch Fiberglas insulation, fully immersed heat elements, high-tensile steel, zinc-clad tanks and rigid steel jackets. All sizes have Waynode magnesium rod and carry a 10-year warranty.

Finish is white baked enamel and



green trim on the round models. Table-top heater has stainless steel top. Bases are recessed for toe space. Panels permit access to electrical parts.

* * *

1116—Food Mixer

Manufactured by Hamilton Beach Co., Division Scovill Mfg. Co., Racine, Wis.

OUTSTANDING feature of the new Hamilton Beach Food Mixer Model G is "Mixguide" which puts ten speeds under the thumb and under the eye for one-hand operation. The easy-on, easy-off saddle attachment is another exclusive feature which gives one-hand portability.

"Bowl control" is achieved by a lever at the bottom of the standard which shifts bowl while beaters are in

operation to insure smooth mixture of all types of ingredients.

Other points of the new Hamilton Beach mixer are full power at all speeds regardless of the weight of the batter, new light weight handle, sure-grip bowls, and a free-flowing juice strainer.

News from the South

Anniston, Ala. — Announcement has been made of the grand opening of the Montgomery Fair Appliance Store, Anniston Branch, at 1213 Noble Street. The firm will handle electric ranges, automatic washers, home freezers, water heaters, etc. E. T. Sullivan is manager, and Paul Boyd is assistant manager.

* * *

De Witt, Ark.—A new dealership, the Ashby Electrical Appliance Company, has opened in the Crittenden Building. Manager is Elton Ashby and his associate is Guy Ferguson. The firm will handle a complete line of electrical appliances.

* * *

Gurdon, Ark.—The opening of Milburn-Moore Appliance Company, located on East Front Street, has been completed. The firm will feature radios, refrigerators, and home freezers.

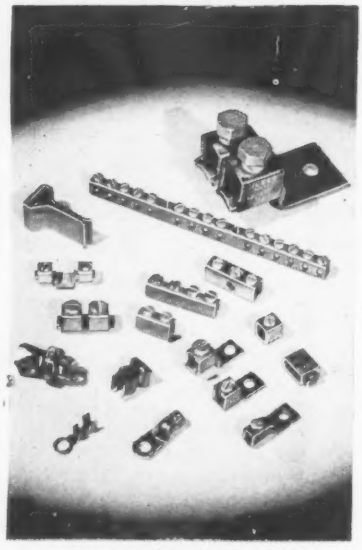
* * *

Little Rock, Ark.—Formal opening of the David Ray Electric Company's new appliance department has been held. They will handle refrigerators, ranges, washers, vacuum cleaners, and ironers as well as a full line of small appliances.

* * *

Little Rock, Ark.—The Little Rock Refrigeration Company, home appliances and commercial refrigeration equipment, has formally opened in its new and larger quarters at 401 West Capitol. Herman Cumnock is president of the firm.

ILSCO
Electrical Connectors



MANY TYPES AND SIZES
WRITE for 54-page illustrated catalog.
ILSCO COPPER TUBE & PRODUCTS, Inc.
CINCINNATI, OHIO

Texarkana, Ark.—W. R. Kelly is in charge of the Electrical Department of Wooten & Dillard Inc., 110-112 East Broad Street, which held its grand opening recently. A complete line of electrical appliances is handled.

* * *

Leesburg, Fla.—Several hundred townspeople attended the recent grand opening of Jess Dooley's new appliance store at 609 West Main Street. The newly remodeled Dooley store is one of the most attractive of its kind in Florida.

* * *

Jacksonville, Fla. — The Reamy Company, Inc., household appliance firm formerly located at 223 West Forsyth Street, has moved to 1429 San Marco Blvd, according to an announcement by H. J. Reamy, head of the organization. The new location will afford larger space for the firm.

Tampa, Fla. — General Electric Supply Corp. has formally opened its new and modern plant at 514 South Morgan Street. The management states that the new plant doubles the company's warehouse space, permitting larger and more complete stocks of electrical supplies and merchandise.

* * *

Tampa, Fla.—An extensive remodeling and modernization program has just been completed by Ed Pemberton, owner of the Tampa Radio Sales at 809 Florida Avenue.

* * *

Tarpon Springs, Fla.—Open house was held at the Gulf Electric Company on the occasion of their grand opening in a new location at the corner of Tarpon and Pinellas Avenues. Of concrete and steel construction, the building measures 70 x 160 ft., with a mezzanine floor for offices.

* * *

Venice, Fla.—Appointment of Ernest Peter, owner of the Venice Electric Shop in the El Patio Hotel building, as exclusive Frigidaire dealer for Laurel and Osprey, has been announced.

Albany, Ga.—Westinghouse Electric Supply Company has opened a branch under the management of G. L. Edge, Jr. for the purpose of distributing electrical appliances throughout the southeastern district.

* * *

Macon, Ga.—A new enterprise in the city is the Morris Appliance Company, 439 Broadway, which handles a full line of major and small appliances.

* * *

Kingman, Kan.—In order to have more space available, the Parker Electric Company has moved into new quarters at 109 Ave. A, East. Mr. Parker stated that he will now be able to carry a larger stock of merchandise.

* * *

Marion, Kan.—A change of ownership was completed recently with the purchase by L. M. Ollenberger of the Marion Electric Shop, operated for the past 37 years by Earl Magathan. The business of the shop will be continued from the present location, Mr. Ollenberger said.

* * *

Neodesha, Kan. — Announcement has been made of the opening of the H & V Electrical Service in the

Statement of Ownership

Statement of ownership, management, circulation, etc., required by the Acts of Congress of Aug. 24, 1912, and March 3, 1933, of Electrical South, published monthly at Marietta, Georgia, for October 1, 1948.

State of Georgia, County of Fulton.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Frank P. Bell, who having been duly sworn according to law, deposes and says that he is the Business Manager of the Electrical South, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication, for the date shown in the above caption required by the Act of August 24, 1912, as amended by Act of March 3, 1933, embodied in Section 537, Postal Laws and Regulations, printed on the reverse side of this form to-wit:

1. That the names and addresses of the publisher, editor and business manager, are:
Publisher, W. R. C. Smith Publishing Co., Atlanta, Ga.
Editor, Carl W. Evans, Atlanta, Ga.
Business Manager, Frank P. Bell, Atlanta, Georgia.

2. That the owners are:
W. R. C. Smith, Publishing Co., Atlanta, Ga., Estate of W. R. C. Smith, Atlanta, Ga.; O. A. Sharpless, Atlanta, Ga.; T. W. McAllister, Orlando, Fla.; W. J. Rooke, Atlanta, Ga.; E. W. O'Brien, Atlanta, Ga.; J. C. Cook, Atlanta, Ga.; R. P. Smith, Atlanta, Ga., and Mrs. E. L. Philpot, Atlanta, Ga.

3. That the known bondholders, mortgagees and other security holders, owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities, are: None.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security company but also in cases where the stockholders or security holders appear upon the books of the company as trustees or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company, as trustee hold stock and securities in a capacity other than that of a bona fide owner and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than so stated by him.

FRANK P. BELL,
Business Manager.

Sworn to and subscribed before me this 1st day of October, 1948.

SEBA J. JONES,
Notary Public at Large.

PRECISION BUILT

CUTOUT BOXES
JUNCTION BOXES
WIRING TROUGHS
TELEPHONE CABINETS
WEATHER-PROOF CABINETS
WEATHER-PROOF SEAM WELDED JUNCTION BOXES & FLOOR BOXES
PEDESTALS & FLOOR BOXES
TRANSFORMER CABINETS
SPECIALS TO CUSTOMERS REQUIREMENTS

by
METAL FABRICATING SPECIALISTS

B&C METAL STAMPING CO.

95 PIEDMONT AVENUE, S. E. ATLANTA, GEORGIA

building at 109 North 4th. Headed by Lester Hoff and Bob Vail, the new firm will give expert repair service on all types of radios, refrigerators, washing machines and other electrical appliances.

* * *

Ottowa, Kan.—The building at 330 South Main has been leased by Wilson Mack, of the Mack Electric Company, 314 South Main. Mr. Mack carries a full line of appliances in addition to air conditioning equipment and a service department.

* * *

Parsons, Kan.—The Wellington Radio and Appliance Store has had its formal opening at 119 North Central. This announcement was made by Marvin Wellington, owner of the firm, who also stated that his son Owen Edward would serve as manager of the new dealership.

* * *

Louisville, Ky. — Miller Appliance Company, of this city, has filed a charter amendment changing the corporate name of the firm to Vanelli Appliance Company.

* * *

Middlesboro, Ky. — With capital stock of $10,000, the Pinnacle- Maytag Company has been formed to deal in electrical appliances. The incorporators are C. Y. and C. N. Blakeman and R. R. Jenkins.

* * *

Lafayette, La.—Announcement of the opening of Pierret's Electric Works, licensed contractor at 421 Saint Charles Street, has been made. V. P. Pierret is the owner.

* * *

Lafayette, La.—Southwestern Appliance Company has opened for business in their new location at 1005 Cameron Street.

* * *

New Orleans, La.—It has been made known that the Gamble-Mattes Company, manufacturers' agent, has dissolved partnership. Cameron B. Gamble has opened his own firm, dealing in electrical appliances. Manuel Mattes has entered the electrical supply and fixture business.

* * *

New Orleans, La.—Gentilly Supply Center, Inc., has opened with E. E. Nores, Jr., as president; S. E. Lorio, vice-president; and G. C. Baulmay, secretary. All these men have had experience in the appliance business in this city.

* * *

Shreveport, La.—Naming A. W. Wheeler manager for the warehouse and wholesale electrical supplies office, the Graybar Electric Company has opened its 100th distribution point at 90 Fannin Street. Kenneth Brown is operating manager for the new office.

* * *

Biloxi, Miss.—Announcement of the opening of the Bell Furniture Company, home appliance dealer in this city, was made recently. The firm is located at the corner of Main and Washington Streets.

* * *

Biloxi, Miss.—Ironers, washing machines, refrigerators, driers, and other appliances will be handled by the Combel Appliance Store, which has opened at 916 West Howard Avenue.

* * *

Vicksburg, Miss.—A new home appliance store, the Chatham-Johnson Service, has recently opened at the corner of Clay and Monroe Streets. A complete line of home appliances will be featured.

* * *

Booneville, Mo.—The Appliance Center, a new electrical appliance store under the management of Brian Birge has opened at 417 East Spring. Mr. Birge has had a wide experience in the electrical appliance business.

* * *

El Dorado Springs, Mo.—Under the proprietorship of Herschel L. Scott, who came here from Dallas County, the Scott Maytag Company has opened for business in the Ivory Building at the corner of Broadway and Main Streets. The new store has on display washing machines, deep-freeze units, electric stoves, and hot water heaters.

* * *

Fayette, Mo.—Located at 114 South Main, the Fayette Electric Company has opened for business under the management of L. L. Wright, C. P. Nichols and Aubrey Stidham. The shop specializes in repairs for radios, refrigerators, washing machines and all small appliances. House wiring is also featured.

* * *

Harrisonville, Mo.—Approximately 100 people attended the grand opening of the Walker Electric Company here. Mr. Walker carries a complete line of major and small appliances.

* * *

Versailles, Mo.—Gerken Electric Appliances, successors to the Gray Electric Service, has been formally opened to the public. The store features major household appliances and electric farm equipment.

* * *

Charlotte, N. C.—With a capital stock of $100,000, the Modern Electric and Supply Company has been incorporated to deal in household appliances. W. H. Yandle, L. D. Roddey and Elbert Foster are listed as the incorporators.

* * *

Charlotte, N. C.—The appointment of J. C. Peterson has been announced as manager of the Nash-Steele-Martin, Inc.'s branch office in this city. E. B. Peabody, formerly manager of the Charlotte office, has been made field director for the statewide operation of Nash-Steele-Martin.

* * *

Newton, N. C.—Electrical Wholesalers Supply Company has been incorporated with capital stock of $100,000 to sell electrical supplies. Ned Ramseur, E. E. Bost, and V. E. Bost are the incorporators.

* * *

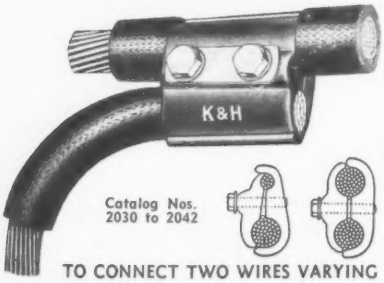
Raleigh, N. C.—R. S. Fouraker, of this city, has been reappointed to a three-year term on the North Carolina State Board of Examiners of electrical contractors. The appointment was made by Governor Cherry.

* * *

Raleigh, N. C.—The Secretary of State has issued a charter to Southern Heating & Electric Company, Inc, which proposes to engage in business as electrical contractors.

A Live Wire is no better than its Connections

UNIVERSAL PARALLEL TAP CONNECTOR



TO CONNECT TWO WIRES VARYING EITHER GREATLY OR SLIGHTLY IN SIZE OR TWO OF THE SAME SIZE

The tightening bolts exert an even pressure on both wires regardless of size. The clamping surface is large and covers a contact area several times greater than the cross-section area of the wire themselves. Locking feature insures a permanent connection.

• WRITE FOR BULLETIN 15-A •

K&H KRUEGER & HUDEPOHL
Solderless Terminal Lugs and Connectors
VINE AT THIRD—E.S. • CINCINNATI 2, OHIO

Authorized capital stock is $100,000, with $7,500 stock subscribed by W. W. Merriman, Jr., W. G. Weems and P. H. Woods.

* * *

Winston-Salem, N. C.—Industrial Electric Company has been incorporated with capital stock of $100,000 to engage in an electrical contracting business. Jack Workman and T. D. Carter, both of Winston-Salem, and W. B. Higgins, of Tobaccoville, were listed as the incorporators.

* * *

Drumright, Okla.—Under the supervision of Mr. and Mrs. Gene Rush, a branch of the Eubanks Appliance Store of Oilton has opened here, according to J. W. Eubanks, owner. The store is located next door to the Tower Theater lobby.

* * *

Pauls Valley, Okla.—Among the new business owners in this city are Mr. and Mrs. A. M. Allred with their new Sporting Goods, Gift, and Appliance Store at 107 South Willow Street.

* * *

Sand Springs, Okla.—The Pickett-Droze Appliance Company has opened for business in the building at 219 North Main Street. It was stated that the store will have a complete service department in addition to a full line of electrical appliances.

* * *

Anderson, S. C.—A charter has been granted the Wholesale Electrical Supply Company by the Secretary of State, listing authorized capital stock at $75,000. L. D. Webb is president.

* * *

Camden, S. C.—Watson's Appliance Company, Inc., has been granted a charter by the Secretary of State to deal in appliances. Authorized capital stock is $5,000 and J. C. Watson, Jr., is president.

* * *

Columbia, S. C.—The Lavender Company, featuring home freezers, radios, washers, ironers and other electrical appliances, has opened for business at 5809 Monticello Road. A. M. Sayers is manager.

* * *

Greenville, S. C.—Under the proprietorship of E. L. Landreth, the Landreth Appliance and Music Store has gone into business at 1401 Old Easley Bridge Road.

* * *

Rock Hill, S. C.—A new enterprise in this city, My Electric Company, has opened at 415 South Trade Street. The company, under the ownership of Roland K. McReavy and Paul F. Youngue, will specialize in residential, commercial and industrial lighting.

* * *

Bristol, Tenn.—The Tennessee-Virginia York Company has been organized in this city as the distributors for refrigeration appliances in east Tennessee and southwest Virginia.

* * *

Cleveland, Tenn.—Two hundred thousand dollars has been issued in electric revenue bonds by the Cleveland Electric System, according to announcement by W. W. Jacobs, manager. This money will be used to finance expansions during the next twelve months.

* * *

Memphis, Tenn.—A new building has been leased by D. F. Wagner and E. B. Thorne as the first step in their plan to open a store handling electrical appliances and hardware.

* * *

Memphis, Tenn.—The E. W. Smith Hardware Company at 1557 Lamar Street, which features a complete line of radios, washers, ironers, and small appliances, has been purchased by C. H. Allen and Lowell G. Hays, who have changed the name to Allen and Hays Hardware Company.

* * *

Nashville, Tenn—According to an announcement by A. M. Sweeney, general sales manager of G-E's appliance and merchandising department, L. W. Harvath has been appointed local manager of appliance sales in Nashville.

* * *

Beaumont, Tex.—Ed Wheat, formerly assistant electrical inspector, has been promoted to electrical inspector for Beaumont, filling the place left vacant by the resignation of C. A. Weber. Floyd E. Mack has been named assistant electrical inspector.

* * *

Corpus Christi, Tex.—A new firm, A. & H., Inc., has been incorporated at 3409 Agnes Street for the sale, installation, maintenance and servicing of air conditioning and heating equipment. J. B. Jones is president and J. E. Sampson is vice-president.

* * *

Dallas, Tex.—Gay White has been named general merchandise manager for Texas Wholesalers, 2211 Commerce Street, Dallas wholesale electric appliance firm.

"KNOW HOW" Counts!

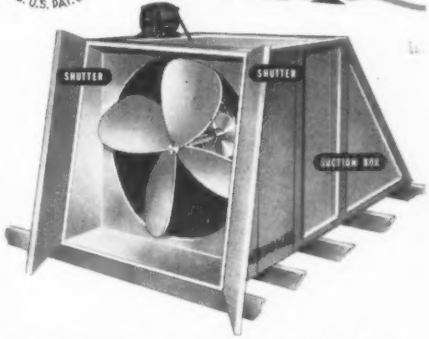
WIND-WAY

TRADE MARK

REG. U.S. PAT. OFF.

ATTIC FAN SYSTEMS

Engineered . . . Tested . . . Job-proven . . . Sized for every need . . .



Don't just sell ANY attic fan—sell the RIGHT SIZE and type attic fan SYSTEM for complete customer satisfaction. There is a WIND-WAY system for every job—complete with fan, suction box, trap door, grille, moulding, fire fuse link and shutters. Easy to install—a complete and proper installation in any house. SAVES money—MAKES money!

WRITE FOR DESCRIPTIVE FOLDER

WIND-WAY FAN AND VENTILATOR CO.

531 St. Joseph St. • New Orleans, La.

El Paso, Tex.—Formal opening of "The Electric Center," at Stanton and Main streets, has been held. The store, remodelled and redecorated, is being operated by E. J. Hawk, Joe Cubble, and Newton Harper.

* * *

San Antonio, Tex.—The James Papas Refrigeration Company is soon to be housed in a new building under construction in the 300 block of South Flores Street.

* * *

Danville, Va.—A move to new and larger quarters has been made by the Danville Electric Company, under the managership of W. P. Scott. The firm, handling a large line of electrical appliances, will be located at 117 Craghead Street.

* * *

Covington, Va.—In a recent change of ownership, Vick Brothers Neon and Electric Company have sold their business to H. R. Walthall and C. C. Houff. The new owners have re-opened at the same location under the name of The W & H Electric Company.

* * *

Richmond, Va.—With authorized capitalization of $50,000, the Virginia Home Equipment Corporation, dealers in electrical appliances and fixtures, has received a charter from the State Corporation Commission. William C. Freeman is president and treasurer.

* * *

Roanoke, Va.—The Poole-Miller Company, electrical appliance dealers, have moved to their new quarters at 213 Franklin Road, Southwest. Refrigerators, electric ranges, washers, ironers, and home freezers are featured.

* * *

Roanoke, Va.—An attractive appliance store, The Coon Electric Company, has opened at 2320 Williamson Road to carry a complete line of lighting fixtures, major and small appliances. In addition they will specialize in contract wiring and repairs.

* * *

Charleston, W. Va.—The Secretary of State has issued a charter to Tennant Electric Company, Inc., of Fairmont, listing authorized capital stock at $10,000. The incorporators include Robert H. Tennant, Gypsy Geraldine Tennant, and James M. Tennant.

* * *

Charleston, W. Va.—A new electrical firm, Bayliss & Ramey, Inc., has been organized with capital stock of $50,000. The incorporators are J. M. H. Bayliss, Earl J. Ramey, and June Estep Hammonds.

* * *

Morgantown, W. Va.—Capitalized at $25,000, the Modern Equipment Company has been organized here to deal in home appliances. The incorporators are J. C. Lockhart, Guy A. Croston, and Doris A. McCrea.

* * *

Union, W. Va.—The Monroe Electric Company has been opened in this city by Alfred Smith, formerly of Old Sweet Springs. The firm will handle electric appliances and fixtures.

Trade-Ins Become Profitable

(Continued from page 48)

offered for sale has been inspected by the mechanics and put in good shape.

The painting service given by the shop adds much to the value of used merchandise, and keeps it moving fast. Articles such as radios that do not need painting are cleaned and polished. Visible metal parts are also polished.

"People feel that they get value for their money when they buy clean, fresh-looking merchandise at the second-hand price," said Mr. Bernheim. "We are building good will for ourselves at our used shop by giving value."

Behind this activity in dealing in trade-ins is a well-organized sales program for moving a large volume of new major appliances. Regular demonstrations are given on washers, ironers, and home freezers. People who own older models attend these demonstrations to compare their own appliances with the new. They know they can trade in any appliance they own—radio, refrigerator, and even small appliances.

Because of their unusual repair facilities, Bernheim Brothers accept anything electrical in trade that can be converted into salable merchandise.

"We make some profit on nearly every trade-in we service for resale," said Mr. Bernheim. "Sometimes we find that we can forego the profit on the serviced trade-in if the trade helps to sell an expensive major appliance. Even a slight loss could be charged to sales cost, but we do not often lose. There is a wide open market for the sale of used merchandise put in good condition mechanically and refinished to look new. We never put junk on the sales floor of the second-hand store. Many of our sales are made to customers who were directed to the store by other customers."

Demonstrate To Sell

(Continued from page 53)

quirements of his family, he naturally is dissatisfied. Although it may be best of its kind, if it does not fit his needs, the customer will feel that he has been misled. Since a disappointed customer is rarely silent, this sort of incident will eventually decrease the store's list of potential customers.

In sizing up the customer's needs, it is best to discover the number of people in his family. It is foolish for a salesman to attempt to sell a 10-cubic foot home freezer to a family of two—unless the customer specifically prefers a unit of this size. The pattern of the family life is the main point to be considered. Families often grow, and it might be wiser for a small family to invest in a larger size of refrigerator or freezer in the beginning, rather than reach a place where the small one is overcrowded. Less satisfactory refrigeration results when the appliance is filled beyond its capacity. Also, the family who does a great deal of entertaining, prepares its own meats, grows its own

BRONCO
WIRES and CABLES
Long Life with Safety
• EXTREME FLEXIBILITY
• LIE FLAT—no interference with working parts
• KINK AND TANGLE FREE
• ENGINEERED FOR THE JOB
• FREE STRIPPING
BRONCO 60 with du Pont
Neoprene jacket resists oil, sunlight
—abrasion and cutting in rough use.
WHOLESALERS. Bronco is a fast moving, profitable line — nationally advertised to dealers and users. Catalogue sheets for your salesmen and customers. Pamphlets, circulars, cuts and other advertising matter available to help you sell. Write today for name of nearest representative.
WESTERN
Manufactured by
WESTERN
INSULATED WIRE CO.
1001 East 62nd St., Los Angeles 1, Calif.

vegetables, etc., is probably in need of one of the larger models. By careful questioning the salesman can easily decide what size is most suitable for each particular need.

Mr. Hermann believes that an advance over pre-war selling techniques has been scored by the method of training all of his sales staff to demonstrate any or all of the appliances when necessary. He points out that before the war most appliance dealers were concentrating at least three-fourths of their merchandising promotion on electric refrigerators and electric ranges. Those two appliances were the ones which interested the housewife most, but now, however, there is a vast line of automatic washing machines, electric ironers, frozen food cabinets, electric dishwashers, garbage disposal equipment, etc., most of which, surprisingly enough, are still new to the average prospect. Every detail of operation must be explained if she is to be seriously interested, and here again it is the salesman familiar enough with the appliance to demonstrate it who will make the sale.

The importance of the salesman's demonstrating ability cannot be overemphasized, but in addition his sales story must be thorough and effective. When these two factors are carefully co-ordinated the salesman will have arrived at a successful selling formula.

Turn Returns Into Good Will

(Continued from page 50)

6. *Acknowledge mistakes promptly*: In many cases where merchandise is returned or an adjustment is sought the fault is obviously with the store or the manufacturer. If this is the case common courtesy and good business ethics demand that these mistakes be acknowledged promptly. When this happens most appliance dealers assure the customer that it was an unusual situation and thank the customer for calling it to their attention.

7. *Be fair, but firm*: As mentioned previously, 95% of all claims are justified, but what about the other 5%? Human nature being what it is there will always be a few customers who will impose on an appliance dealer. Even though this 5% group is in the minority they can cause a great deal of trouble and consume valuable time.

This group take advantage of the store policy "the customer is always right" and demand their rights in no uncertain terms. In dealing with this group, made up of chronic complainers and professional adjustment seekers, some appliance dealers have discovered it is the best plan to follow the rule: Be fair, but firm.

Application of these rules will not completely eliminate returns and adjustments, but it will at least make the handling more pleasant. It will speed up handling, add up to more satisfied customers, nad make greater profits for retail appliance dealers.

At long last an automatic can opener has been developed as one more ingenious device for solving man's age-old problem—how to get in the can. This particular opener is electrically operated and designed to handle any type of can. A control knob locks in the can and starts the process. When the knob is flipped back, the can is released and the motor automatically shuts off.

Business Prospects For 1949

(Continued from page 46)

business now. However, it is also true that a considerable increase in number of dealers over the prewar period is justified for at least three of the reasons listed below:

1. The decline in electrical utility merchandising. (Recent survey by "Electrical Merchandising" indicates that the percentage of electrical utilities merchandising appliances has declined from 62 per cent in 1945 to 54.5 per cent today.) This results in considerable increase in number of dealers in areas affected—witness what has happened in the territory served by Southern California Edison.

2. The trend toward suburban shopping centers and away from the big downtown stores—a trend which creates openings for many small dealers in outlying sections of metropolitan areas.

3. The expansion of the market for electrical appliances.

Market for Appliances

The market for electrical appliances, as is the market for any item, is dependent primarily upon three things: A population factor, ability to buy, and willingness to buy. The "Population" factor in the case of electrical appliances is, of course, residential electric customers. "Ability to Buy" may be represented by "Disposable Personal Income" (which is per-

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FLOODLIGHTS

WEATHERPROOF CAST ALUMINUM

NO. B153—3 light assembly shown mounted on island light uses PAR 38 lamps.

NO. B353—3 light assembly uses 300 or 500 watt sealed beam weather-proof floodlamps

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FEATURING the SEALED Beam Type Lamps (Beam and Light Combined in One Unit—No Reflectors) Simplicity—Economy—Adaptability

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sonal income less all direct taxes). "Willingness to Buy" is dependent upon need for the product, public acceptance, advertising, and sales effort.

Charts No. 3 and 4 indicate the expanded market for electrical appliances. The first of these (Chart No. 3) shows the number of residential electric customers for each year, starting with 1929. The significant point made by this chart is that there are today 6 million more residential electric customers than there were in 1942, when appliance production ceased—in other words, the potential market for electrical appliances has increased by 23 per cent. And further expansion of the market during the next several years is indicated as a result of the expected continuance of a high rate of residential construction and the anticipated extension of electric service to some 1½ million rural customers.

"Disposable Personal Income," or "Total Personal Income less all Direct Taxes," is shown on the other chart (Chart No. 4) for the period 1929-1947. The large increases in "Disposable Personal Income" that have taken place during the war and postwar years, must be discounted to some extent by the increased cost of living. However, while the Bureau of Labor Statistics reports the Cost of Living Index as up 70 per cent from 1939, the increase in "Disposable Personal Income" for the year 1947 as against 1939 was 105 billion dollars, or 150 per cent.

The remaining market factor of "Willingness to Buy" has thus far in the postwar years been chiefly a reflection of the pent-up demand of the war years and of increased public acceptance for electrical appliances. These needs, for replacement purposes and for equipping the homes of new electric customers, have made sales effort unnecessary on many appliances. In the months ahead, however, sales effort will be an increasingly important ingredient of the "Willingness to Buy" factor.

The Sales Trend

The trend of Industry Sales from 1929 through 1947 is shown in Table No. 3. It will be noted that 1941, which had been the previous record year in the industry, was topped by 34 per cent in 1946, and by 161 per cent in 1947, when industry sales at retail value reached the impressive total of 2¾ billions of dollars. Sales volumes in 1946 and 1947, of course, are inflated to the extent of price increases which are extremely difficult to measure due to model changes and product improvements. However, after making what seem to be reasonable allowances for price increases (1946 prices were considered to be on an average 25 per cent higher than 1941 prices, and 1947 prices 45 per cent above 1941 prices), we still find 1946 sales slightly above 1941, and 1947 sales exceeding 1941 by some 800 million dollars, or 80 per cent.

Public acceptance of electrical appliances, has reached the point where the volume of replacement business alone will normally constitute a very sizeable amount of business. Considering the number of appliances estimated to be in use and the average life of each appliance under normal use and based on 1947 average retail prices, the volume of replacement business should average approximately one billion dollars per year.

Dollar volume of electrical appliance sales in the first half of 1948 is estimated to be up 10 per cent to 15 per cent from the same period of 1947. Large gains have been made by a number of items including refrigerators, ranges, washing machines and toasters. On the other hand, vacuum cleaners show a slight loss from 1947, and certain small appliances including heaters, heating pads, hot plates and irons are considerably behind 1947 volume. Considering these divergent trends, it appears likely that total dollar sales of electrical appliances for the entire year 1948 will equal, but not exceed 1947. As for 1949, the general economic and international situation is too clouded to permit more than a guess, but in the absence of any seriously retarding

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SCREW IT!

THAT'S ALL WITH SCRU-ITS!

SLIMLINE

AVAILABLE FOR 2—4—6 TUBES

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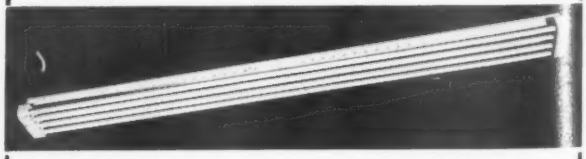

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factors and if supported by imaginative merchandising and intensive sales effort, it appears that industry sales can continue during the year at a rate only slightly under 1948

Learn Problems Of Customers

(Continued from page 40)

a few 220-volt recessed electric heaters installed for the cool days when it would be too early to start the furnace.

In the kitchen there was a dishwasher, a garbage disposer, an electric range, an automatic washer, an automatic dryer for laundry. The main panel was equipped with circuit breakers and branch line circuit breakers were installed in various places where it would be convenient to reset them if they tripped.

Three-fourths of the business of Mr. Ely is conduit type of wiring. Despite the lack of inspection, Ely has installed wiring systems in conduit in all his theater jobs, his new building jobs, and in several of his better-type residence jobs.

One of his larger jobs under way now is that of Middlesboro's first radio station. He will do all the wiring on the job to the base of the tower, including lighting, power panels and radio panels.

Until he opened up shop in Middlesboro, Mr. Ely was a vocational instructor in the city schools in Nashville, Tennessee. He was a civilian instructor in the army for one year and for several years was a mechanical instructor at Oak Ridge for Tennessee Eastman Corp., in which 60 per cent of the large number of employees were students in the training division of the company.

Merchandising Through Co-ops

(Continued from page 41)

The Wauchula, Florida, co-op cited here is the Peace River Valley Electric Membership Co-operative. After nine years of outgrowing its original office space, this co-op recently moved into a fine new building, which included a spacious lobby. The co-op board endorsed Tilyou's recommendation that use of the lobby should be offered to the area's dealers on equal terms.

The result was that appliance dealers in the area served by the co-op system were called together. General interest quickly mounted as the advantages of the display plan became apparent.

The Wauchula plan provides for rotating use of the co-op lobby by four dealers each month. Some effort is made to have each month's display varied. The exhibitors are chosen for the order of space occupancy by a drawing. Each dealer drawn for a given month is reminded two weeks in advance to make preparations for his display. When the list of dealers completes itself, the rotation starts anew. At last reports, 18 dealers from several towns had signed up.

Merchandise is displayed with individual placards bearing the dealer's name and the selling price. Co-op personnel keep the appliances dustfree and in order, but are forbidden to discuss the relative merits of equipment with prospective purchasers.

The Wauchula co-op's lobby, attractively arranged, employs varied lighting colors for more favorable display effect. When dealers request it, the lighting is left on all night. Adequate outlets have been installed for demonstrations, and sales may be

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made direct from the floor by dealers or their representatives.

The pump was sold the day after the building was opened, in May. Since then a substantial number of ranges, refrigerators, water heaters, and several more pumps have been purchased from the display.

"It is our intent," Manager Tilyou has informed the Peace River Valley dealers, "that this display space shall be considered your space. It will be the responsibility of the co-operative personnel to assist you at all times in using this space. It will be yours without cost to you."

Dealers are freely permitted to distribute appliance literature from the lobby during the period their merchandise is on display. The co-op makes one specific request: that merchandise signs be kept in good condition. As they become old and worn, they are to be replaced.

This REA co-op is justly proud of its large new office lobby. Manager Tilyou reports that the co-op has ample flower growing areas and that he expects to have an abundance of plants and palms for decoration of the room.

Far-sighted dealers in many sections of the country have seen the possibilities of the vast new farm market which has come into existence with the rapid spread of rural electrification. Those dealers who are interested in providing quality electric equipment and service to rural consumers will find that most REA-financed electric systems stand ready, like the Peace River Valley Electric Membership Co-operative, to supply every possible merchandising aid.

A Single Form For Every Job

(Continued from page 34)

the job-form proves out the use of all materials.'

At the end of the job, the "balance column" on the job form shows the number of electrical parts which has been charged out for the job and those returned. Feltus Electric Company tries to impress upon its 13 mechanics the wisdom of selecting parts carefully, so that there are no returns which result in excessive bookkeeping, if at all possible.

The most important element of the job form is the double "labor" column at the bottom, according to Mr. Feltus. "We list each mechanic, the total number of hours he works, what he cost us, and what we sell his time for," Mr. Feltus said. "Then we total this up at the bottom along with all materials. From this we are able to determine swiftly the exact number of hours expended for any job, and to keep tighter control on man-hour efficiency."

After the form is returned with the job completed, it is stamped "posted" when the bill is mailed, and the form is put away in an index envelope which forms a permanent record of the installation for the future. Feltus Electric Company uses a modern electric bookkeeping machine in making out its invoices, itemizing every hour, every part used, and a duplicate of the itemized bill goes in the job envelope.

The file has proven immensely valuable whenever repairs are necessary, and in selling other jobs, according to Mr. Feltus. Seldom does a customer enter the southern contracting firm with a particular problem which cannot be "duplicated" by one of the completed job forms on file. Pulling one out, and showing approximately what costs have been on a similar job has helped to sell many installations.

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Designed especially for industrial use, time tested and job tried—Nalco Infra-red Lamps with their long lasting carbon filament and sealed, reinforced base give installations that are enduring and dependable. This in turn assures the dealer that he can depend on a steady stream of reorders from satisfied users. Stock NALCO Infra-Red Dritherm Lamps for more industrial business.

Southeastern Representative Carl Henry, 170 Ellis St., N. E. Atlanta Ga.

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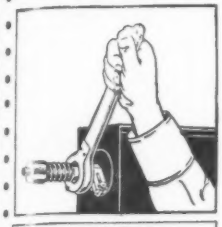
SAVES TIME!

CLAMP-IN BOX SUPPORTS

Quickly installed in any kind of wall—sheet-rock—beaver board—lath and plaster-wood-metal lath, etc. Holds switch boxes firmly without screws or nails.



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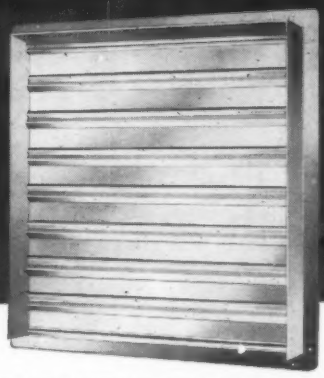

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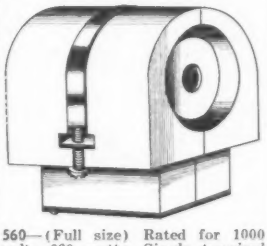

560—(Full size) Rated for 1000 volts 660 watts. Single terminal connection. For Slimline.
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Here is instant starting without starters. They also will hold other specialty lamps with same bases. Used in pairs with a holder each for the primary and secondary ends. Each unit has separate circuit assuring absolute safety. Corrosion is prevented by spot welding at electrical connections. Made of white urea plastic.

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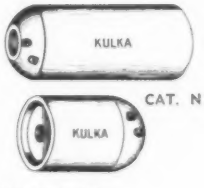

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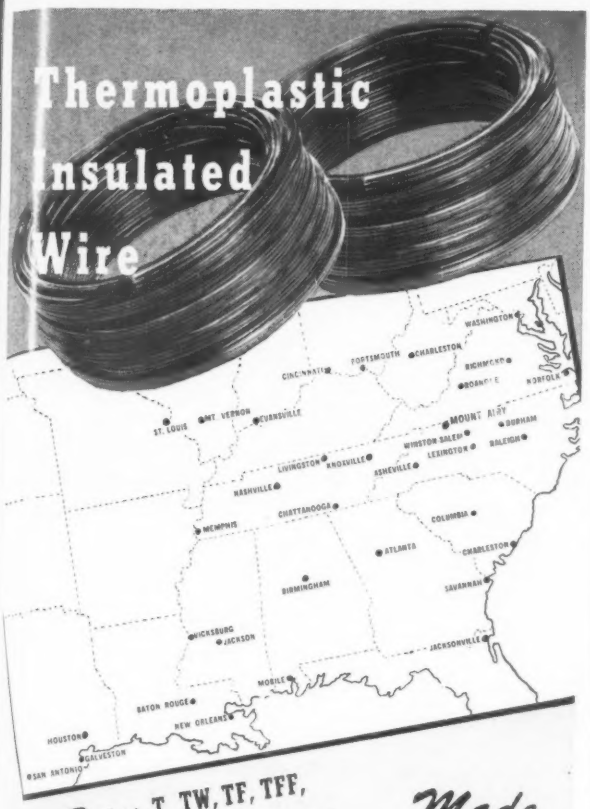
CHEMCLAD



Types T, TW, TF, TFF, POT and others are Now available

Made IN THE SOUTH *by a* SOUTHERN MANUFACTURER *for* SOUTHERN DISTRIBUTION

Meeting the most rigid specifications — types T and TW, TF, TFF and POT and twisted multiples — ready for delivery now! And here's money-making, money-saving news . . . types T and TW sell at the same price, *making TW the most economical wire you can buy today to meet wet location code requirements!*

We're located to serve you *first*, staffed to serve you *best*. Contact our representatives:

Paul Sherrill, P. O. Box 38, Greensboro, N. C. *Virginia and the Carolinas.*

Henry W. Clower, 375 Whitehall St., Atlanta 3, Ga. *Southeastern States.*

R. J. KEELY COMPANY
1104 Hamilton Avenue
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CAROLINA INDUSTRIAL PLASTICS CORP.

CHEMCLAD *Plastic Products*

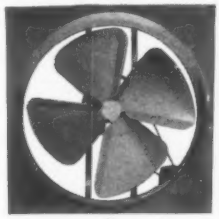
MOUNT AIRY, NORTH CAROLINA

THE COMPLETE FAN LINE

The FRESH-AIR-MAKER *Line*

OFFERS MOST ATTRACTIVE TYPES AND VALUES TO GET THE BUSINESS

You will need the best there is in quality, performance and design for 1948, and all at a reasonable price. Schwitzer-Cummins Fresh-Air Maker fans and Hy-Duty Blowers can't be beat for big air delivery, quiet operation, selling features and looks.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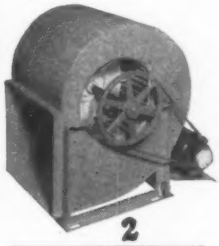
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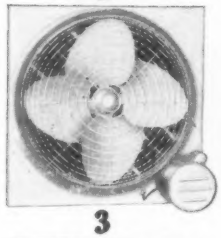
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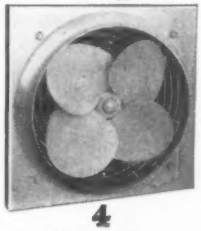
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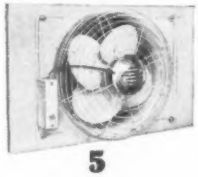
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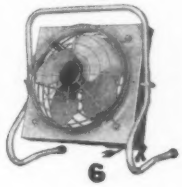
6

7

1 Attic Ventilators
2 Centrifugal Blowers
3 Window Fans
4 Exhaust Fans
5 Adjustable Window Fans
6 Portable Fans
7 Single Inlet Blower

IMMEDIATE SHIPMENT

Investigate . . . Widen your line . . . Boost your profits . . . New literature

SCHWITZER-CUMMINS COMPANY
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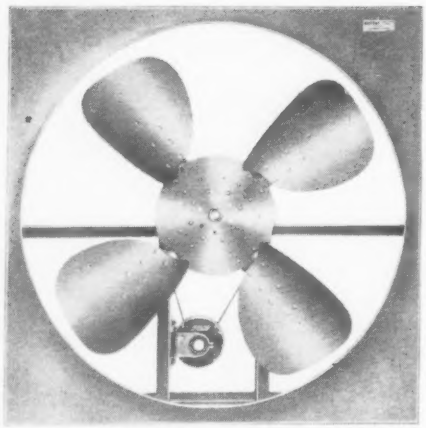
1145 EAST 22 STREET • INDIANAPOLIS 7, INDIANA
Builders of Fine Fans for 30 Years

The Fan that does its Work in a Whisper



MURRAY ATTIC FAN

- **Deep, curved flange orifice cuts down air resistance, eliminates noise.**
- **Four, broad, deep-pitched blades provide maximum suction and steady flow of air.**
- **Resilient base motor and rubber-insulated Oilite sleeve bearing on fan shaft eliminate vibration and operating noise.**
- **Economical, quiet operation assures owner satisfaction.**

You sell satisfaction — at a profit — when you sell Murray Attic Fans. Get ready for more sales and profits next season with Murray Fans. Dealerships in certain territories available. Write us now for complete information.

THE MURRAY COMPANY
OF TEXAS, INC.

DALLAS, TEXAS ATLANTA, GEORGIA

STEP OUT IN FRONT WITH REX

"TOPS" IN QUALITY
"TOPS" IN STYLING
"TOPS" IN SERVICE

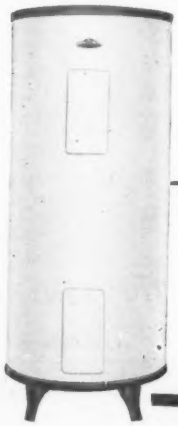
IN

ELECTRIC WATER HEATING

FOR LEADERSHIP in today's electric water heater market you need a product that is certain to capture the public's eye. You need the quality and attractiveness of REX Automatic Water Heaters!

No matter whether your customers prefer the round, the table-high square, or the tall square type, there is a model and size REX Automatic Electric Water Heater that will attract them by its trim lines and smart efficiency.

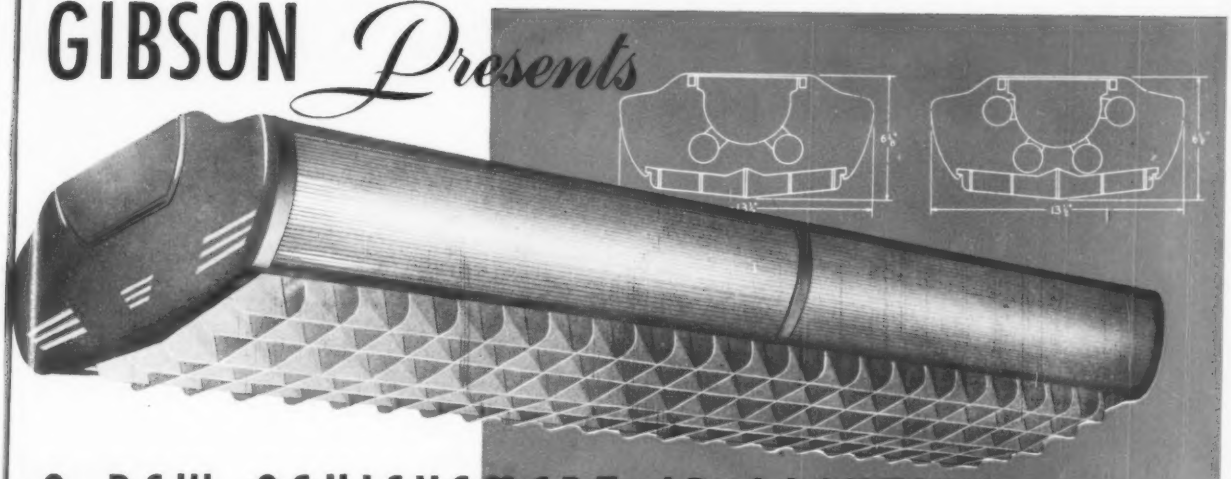
Then, in quality—REX Heaters offer as standard equipment the famous leader in prevention of storage tank rust, the "Elno" wonder wand. And there's the built-in baffle plate for added economy by preventing the mixing of incoming cold water with the heated water already in the tank. The Patrol Temperature and Pressure Relief Valves built into REX Heaters prevent the results of excessive temperature or pressure conditions.



See for yourself the many other good points of REX Heaters as well as the many styles and sizes available. Write today for complete catalog information.

THE CLEVELAND HEATER CO.
ELECTRIC DIVISION
REX WATER HEATERS
2310 SUPERIOR AVENUE
CLEVELAND 14, OHIO

GIBSON *Presents*



A NEW ACHIEVEMENT IN LIGHTING . . .

• FOR OFFICES

The handsome 6200 and 6400 fixtures are an attractive addition to the most modern, most luxurious surroundings. Today's office can utilize louvered, fluorescent lighting while increasing decorative harmony.

• FOR STORES

Ease of installation and maintenance plus attractive design and uniform appearance make the new 6200 and 6400 fixtures an asset to any store. Finished in natural satin aluminum with an attractive decorative design stamped in the end pieces, these new fixtures enhance the appearance of display merchandise

• FOR SCHOOLS

Again, uniformity, beauty and flexibility in answering varying lighting requirements make the Gibson 6200 and 6400 fixtures appealing to school boards. Durable, serviceable and attractive, these striking fixtures mean new sales to schools for you.

• FOR PUBLIC BUILDINGS

Practical, continuous row mountings of lighting fixtures in public buildings is greatly simplified through the use of the Gibson 6200 and 6400 louvered fixtures.

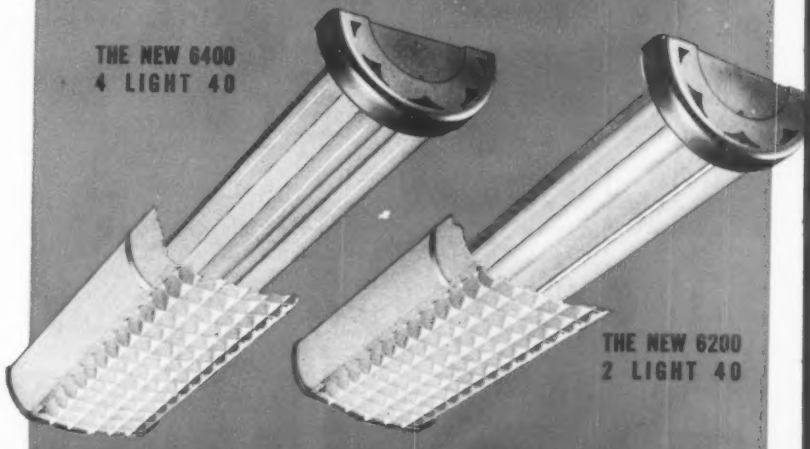
• FOR ADDED SALES

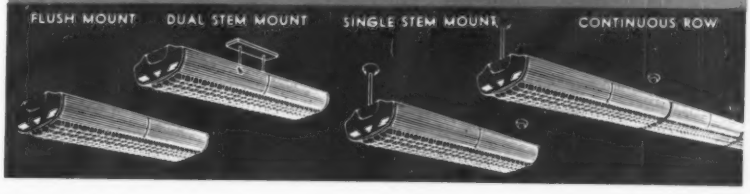
Present installations of Gibson 2400 or 4400 fixtures may be readily converted to new louvered beauty with the addition of Gibson's No. 900 Louver Assembly. This spells more sales, more profits, a faster moving inventory for you!

SPECIFICATIONS:

No. of Tubes	2 or 4, 40 watts
Width	13½"
Depth	6⅜"
Length	48¾"
Weight	6200, 38½ lbs.
	6400, 42½ lbs

Here is striking beauty *plus* ease of installation *plus* flexibility in use! For the first time, fluorescent lighting installations are available wherein two or four lights are incorporated in the same fixture, answering varying lighting requirements *without* sacrificing uniform appearance. The new Gibson 6200 louvered fixture combines the No. 900 Gibson Louver Assembly and the Gibson 2400, two light fixture, while the new 6400 louvered fixture is the sum of the No. 900 Louver Assembly and Gibson's 4400, four light fixture. Both fixtures feature full depth, "hi-baked" white enamel louvers and translucent side panels of Polystyrene plastic, with ends and trim in aluminum.

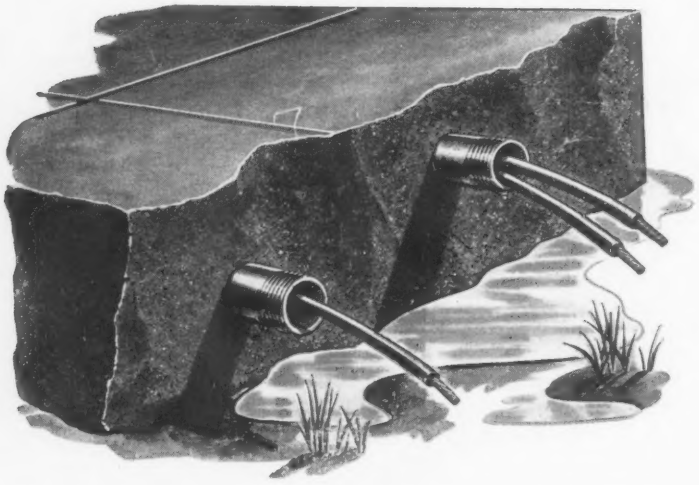




GIBSON MANUFACTURING COMPANY 1919 PIEDMONT CIRCLE, N. E. ATLANTA

Down-to-Earth Facts...

on Wiring Troubles



It's a fact, concrete slabs or masonry in direct contact with the earth can play hob with insulation. Because these installations are nearly always *permanently* wet locations, they demand a wire that's proved in actual use over the years. That's why it's wise to specify—and to insist upon—General Electric Thermoplastic Type TW wire.

With several years of successful on-the-job performance to back it, Type TW wire has proved—and is proving every day—that it's right for permanently wet locations of all types. Underground—in concrete slabs or masonry—in locations where moisture is likely in the raceway, Type TW does the job, and does it well.

Whenever you strike a wet location, wire it with General Electric Thermoplastic Type TW wire. You'll like the way it does the job. You'll like the way it helps do your job, because it's easy to strip, easy to pull, clean to work with. Specify it by name—General Electric Thermoplastic Type TW wire.

Thermoplastic
First . . . and foremost Type TW Building Wire

For more information, write for the new, free booklet, *Building Wires, Cords, and Cables for every purpose,* to Section W15-1124, Construction Materials Department, General Electric Company, Bridgeport 2, Connecticut.

GENERAL ELECTRIC

AROUND THE CIRCUIT WITH YOUR G-E MERCHANDISE DISTRIBUTOR

MAKING NEWS every day is General Electric SUPER PVX* nonmetallic-sheathed cable, the top-quality cable that has everybody excited. It's just what the farmer asked for, because its tough thermoplastic sheath and rotproof thermoplastic insulation resist fumes, moisture, and fungi, in barns and in other troublesome locations. It's just what you've been asking for, too, because its smart finish in ivory or brown makes it right for the top-quality exposed wiring jobs. Ask your General Electric merchandise distributor about SUPER PVX.

THE OLD STAND-BY for more than fifty years is, of course, General Electric BX* armored cable. For all-round jobs, it's first-rate, gives an enviable record of service. And now the new, lightweight BX with bonding strip, in sizes 12 and 14, simplifies your work, does the same old, satisfactory year-in, year-out job.

BREAKDOWNS of machine tools can be a headache for manufacturers who are trying to make good production records. To keep tools on the job, always use Flamenol* portable cords for replacements. Its tough thermoplastic jacket takes lots of abuse, resists acids, oils, water, alkalies, and sunlight. Specify Flamenol portable cords wherever tools have got to stay on the job.

IN YOUR SEARCH for a source of supply that lets you choose from a wide range of wires, cables, and cords, you'll find your General Electric merchandise distributor is your best bet. He's a good man to know—for the wiring materials you need—for helpful advice on wiring jobs. You'll find it pays to contact him often.

*TRADE-MARK REG. U. S. PAT. OFF.